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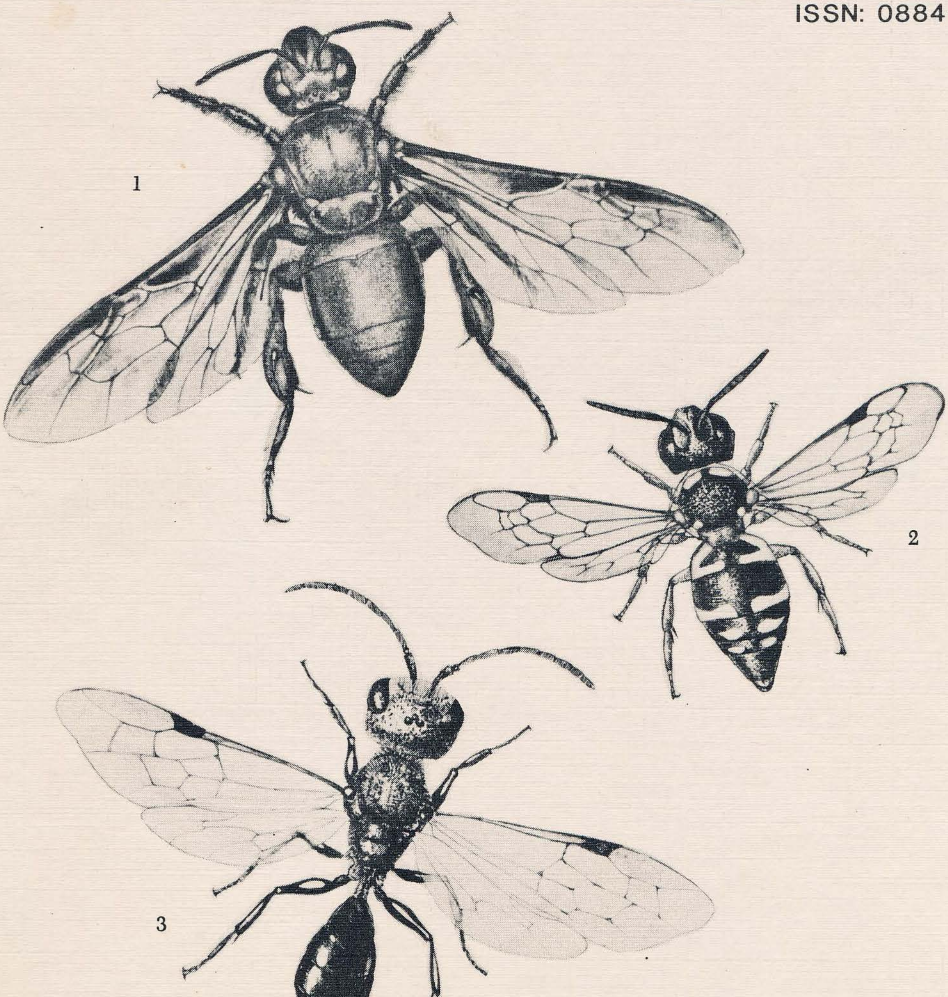

HYMENOPTERA: (1) Euglossa sp. (Apidae), (2) Epeolus sp. (Apidae), (3) Pemphredon sp. (Sphecidae), illustrated by Marek Latzmann, Brno, CZECHOSLOVAKIA.

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SOCIETY NEWS & BUSINESS

I would like to bring the membership and readers of Y.E.S. up to date on Society business since the last issue of our journal. As always, there is a great deal of activity at Y.E.S. International Headquarters!

1987 Membership Renewals. Thank you to all of our loyal members and subscribers who have renewed their membership/subscription for 1987! I appreciate your continued support of and interest in our Society and its programs. For those of you who have not sent in your renewal yet, please do so as soon as possible so that we can provide uninterrupted delivery of Y.E.S. QUARTERLY. Renew your membership now; don't let this be the last issue of the journal that you receive!

I also want to thank all those members who have taken the time to supply me with feedback via the 1987 questionnaire. I appreciate very much your comments, suggestions, and ideas for improvement of our Society, our journal, and our many programs and services. As the opportunities arise, I will be incorporating many of your suggestions into the operation of the Society in 1987. Your opinions do count! By the way, if at any time you have suggestions, criticisms, ideas, thoughts, or comments, please don't feel you need to wait until the annual questionnaire arrives to express yourself. Pick up your pen and write me at any time!

1987 Membership Directory. One of the many benefits of membership in Y.E.S. comes in the form of our Membership Directory. Your membership guarantees the right both to use the directory and to be listed in it (this is option, however). The previous two Membership Directories were prepared a couple of months in advance of the year they were actually issued. The result was that some non-renewed, former members got listed. This created several problems, both for headquarters and for bonafide members. In order to solve this problem we will be issuing the Membership Directory (and/or appropriate supplements) in January or February each year, after the renewal period has expired. Therefore, there will be a short delay in issuing the 1987 directory as we attempt to get on this more logical schedule. Please bear with us on this one!

Y.E.S. International Entomology Resource Guide. The demand for this publication is very encouraging. To date (12/16/86) I have mailed out about 150 copies. The response to this publication is overwhelmingly positive and I will definitely be preparing a second edition of this resource guide in the future. I have already received a lot of new information for inclusion in next edition. Also, I would like to expand it to include a section on insect zoos of the world, and I ask for your assistance in completing this project (see TRADINGPOST request). If you still don't have a copy of the first edition resource guide, it's not too late! Send US $3.00 to Y.E.S. headquarters.

Show the World You Belong to Y.E.S.! The long awaited Y.E.S. T-shirts are now available from Geographics, Inc. in Monticello, Arkansas. The prices are quite reasonable, and the quality is great. Order forms are available from Y.E.S. International Headquarters.

Important Changes to Swap Box Program. **Thomas Greager** of Greensburg, PA, has agreed to act as the Program Coordinator for the Y.E.S. Swap Box Program. After getting the program organized and off the ground, I found that I was unable to give the program large amounts of time because of all the other administrative details and Y.E.S. business I personally conduct. Tom's willingness to coordinate this program is greatly appreciated. All questions, applications, and specimens should now be directed to Tom at his home address (R.D. #6, Box 56-B, Greensburg, PA 15601 USA).

For those of you currently enrolled in the Swap Box program, please assist Tom in any way you can as he begins his job as coordinator. The boxes seem to be moving VERY slow (and we are beginning to wonder if some of them have gotten lost!), so if they come to your mail box send them on there way as quickly as you can. Thank you. Oh, and for those of you who are not familiar with the program, an enrollment application and rules are available from Y.E.S. International Headquareters.

Promotional Activities, New Members, and New Sponsors. Our campaign to spread the word about Y.E.S. and to recruit new members continues to be productive. We have enrolled more than 70 members since the end of October, 1986, and we now have members from 54 different countries! Promotional articles on Y.E.S. have appeared in the journals, newsletters, and publications of several other Societies and organizations, and we appreciate their cooperation and assistance.

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Prelimenary Announcement: A.E.S./Y.E.S. FIELD DAY

The American Entomological Society and Y.E.S. will be hosting a field day designed for members and interested persons to congregate for collecting, identification, talks and socializing. Right now the details are still being worked out, but I can tell you that this event will take place in the Philadelphia, PA (USA) area on the weekend of June 6 & 7 (1987) (with most activities on Saturday). Mark your calendar now! Complete details on this event will be published in forthcoming issues of Y.E.S. QUARTERLY.

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1987 HONOR ROLL*

It is fitting that we acknowledge the special support given by our sustaining members and institutions, for without their assistance many of the Y.E.S. programs and services we take for granted would not be possible. THANK YOU, each and everyone of you!

American Biological Supply Co., Baltimore, Maryland, USA

American Entomological Society, Philadelphia, Pennsylvania, USA

Bio Quip Products, Inc., Santa Monica, California, USA

Joseph L. Despins, Blacksburg, Virginia, USA

Entomological Society of Canada, Ottawa, Ontario, CANADA

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Paula Yokoyama, Corvallis, Oregon, USA

* - as of December 16, 1986

MAIL BAG

LETTERS FROM MEMBERS

Hiltrud "Sam" Weber, a member from Piedmont, Missouri, has written with an suggestion for forming Y.E.S. "support groups". I think this idea is an excellent one, so I want to share Sam's letter with all of you. Sam writes, "I live in the country miles removed from any university, public library, and museum. My greatest pleasure next to collecting and studying insects (Lepidoptera, Coleoptera: Cerambycidae, Coccinellidae, and Carabidae) is receiving mail from my entomological friends and getting my entomological journals. This morning, I received the Fall issue of Y.E.S. Quarterly. While I was reading this publication, a question came to me: 'How can members support Y.E.S. more constructively?' My answer: 'By forming support groups'. Each state, province or country should establish its own support group. Each group should report (on their activities) to the Y.E.S. Advisor/Editor annually. Each group should meet at least once a year, preferably more often. The purpose of these Y.E.S. support groups would be to recruit new Y.E.S. members, to assist in any way necessary (example: assistance with plans for the 25th anniversary conference), to seek funds for scholarships, and to support and help each other. If you live in Missouri and if you are interested in getting to know your Y.E.S. neighbor, please write: Hiltrud M. Webber (nickname Sam), Rt #2, Box 98, Piedmont, MO 63957, or call: (314) 856-4540."

Personally, I'm all in favor of any idea that will increase member interaction and cooperation, increase participation in Society affairs and business, and increase the overall benefits membership in our Society!

In some ways this suggestion is not totally new, as we once had a regional editor system back in the early days of TIEG. There were a few minor difficulties with getting sufficient cooperation from volunteers, but the system was finally dropped because it was felt that subcategorization of members would be more effective if it were done primarily on an entomological-interest basis (hence the Sections 1-12) rather than on a primarily geographical basis. Obviously there are advantages to both systems of member networking! Incidentally, our membership directory is set up so that you can search for members that share your entomological interests, or live near you, or both!

I would be interested in hearing the thoughts of other members on this idea. I would especially like to hear from members interested in volunteering as leaders for support groups or local chapters (or whatever you want to call them). As I mentioned before, I would be delighted to see any activity that increases the level of face-to-face interaction among Y.E.S. members.

PUBLICATIONS BY MEMBERS

PRITAM SINGH and Michael D. Ashby Production and storage of diapausing codling moth larvae. Entomol. exp. appl. 41: 75-78 (1986)

ARE YOU REGISTERED WITH PIFON?

Have you considered registering with PIFON (Permanent International File of Naturalists)? Both PIFON and the closely affiliated "Naturalists' Directory and Almanac (International)" have been useful in assessing the world's natural history human resources for many years. The managers of the PIFON data base are keenly interested in bringing together those naturalists with interests and abilities in the broad areas of natural sciences. One thing they hope to do in the next few years is encourage the building of collections, especially local collections that represent a census of the local populations of plants and animals (including insects, of course). Also, in recent years the exchange of specimens between naturalists has waned. They believe that exchanges are not only useful to science, but also bring excitement into the pleasurable art of collecting. Obviously, many members of the Young Entomologists' Society agree with these goals.

If you would like to enter your name and interests into PIFON, all you have to do is complete the application and mail it to the PIFON office (there is no cost for a listing!). Applications are available from PIFON, c/o Dr. Ross H. Arnett, Jr. , 4300 NW 23rd Avenue, Suite 100, Gainesville, FL 32606 USA, or from Y.E.S. International Headquarters.

ENTOMOLOGICAL SOCIETY OF AMERICA -- RENO, NV

I just returned from the 1986 ESA meeting in Reno, NV. What an exciting experience! It was a great pleasure to meet some fellow YES members, especially Eric Eaton and Mark Khun. After talking to various members we agreed it would be appropriate to have an informal gathering of YES members who attend the ESA meeting. So, starting with next years meeting in Boston, MA (USA) we will do exactly that. Details will be sent out late next summer.

Why Save Insects?

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Should humanity be concerned with the conservation of insects and other invertebrates? We do not question the need to protect our children, and preserve playgrounds for them to romp in, and it is precisely our youngsters who notice details and tiny creatures around them. Kids exhibit the "sense of wonder" that Rachel Carson wrote of, and show the "biophilia" that Edward O. Wilson concludes is a part of each human being.

Preserving our natural world for future generations seems to be a standard plea for conservationists, but perhaps it is not a very convincing argument. Too many parents convince their children that animals are harmful, and are to be conquered. The ideal of coexistence is ignored, and another generation carries on a tradition of ignorance. Secondly, with the rapid growth of human populations, and the consequent acceleration of environmental destruction, there is the distinct possibility that many species will not be preserved for present generations! Perhaps conservationists should confess their selfishness and admit they do not want to witness the extinction of species in their lifetimes. This would also serve to emphasize the urgent need for conservation.

In his classic work Life on a Little Known Planet, Howard Evans states "...I happen to like yellowjackets; do I not have a right to yellow jackets if my neighbor has a right to a cat?" He continues: "If freedom means anything at all, it means the right to choose one's environment and one's friends." In America, at least, we are guaranteed the right to the pursuit of happiness. For some people that right includes the pursuit of insects, and if others infringe on that right, it is a violation of the freedom of those who enjoy nature. Thus, conservation is really a human rights issue.

Another popular reason for preserving species is that we may find some species that can benefit humanity. In terms of biological control of pest insects, we could use more predators and parasites, but some of these potential allies could become extinct as rain forest are cut down and other habitats eliminated.

Should more ammunition be necessary in the defense of insects and other wildlife, there are other arguments. Insects and associated invertebrates make up over 90 percent of the animal kingdom, both in diversity of species and in sheer numbers of individual organisms, so they must be important! If we want to keep "our" planet healthy, we can't afford to undermine this biological foundation. Neither should we destroy what we don't understand, and this includes most all invertebrates. Also, allowing the extinctions of animal species is an insult to those scientists and students who have spent their lives studying such organisms and fighting to protect them. If we do not value other species, then we can at least value our scholars who do. Finally, one can argue that there is no valid reason for not conserving other creatures!

Perhaps through the public education efforts of Y.E.S., the Xerces Society, and other dedicated groups and individuals, there will come a time when we will not question the need to protect our small creatures, or preserve wild playgrounds for them to flit, fly, and romp in.

Tiger Beetles of Israel and Sinai
(Coleoptera: Cicindelidae)

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ISRAEL

This article contains information on the habitats and geographical distribution of Israeli tiger beetles. In Israel there are two "zones" in which Cicindelidae occur. The first area is the coastal plain of the Mediterranean Sea, and the second is the Great Rift Valley. There are 11 species of Cicindelidae known to occur in Israel. Three of these species occur only in the Sinai (which Israel returned to Egypt in the peace agreement of 1982).

Cicindela campestris herbacea (L.)

Distribution: Syria, Lebanon and northern Israel. In Israel it is known only from Mt. Hermon, Nahal Nimrod, and Mt. Meron (1 specimen, April) (Fig. 1)

Bionomics: The Mt Hermon population occurs on sandy rocks near small springs. This could be an endemic subspecies for northern Israel and Lebanon. Adults are active from the beginning of May until the middle of November.

Cicindela (Cylindera) contorta vandenbergi (Mandl)

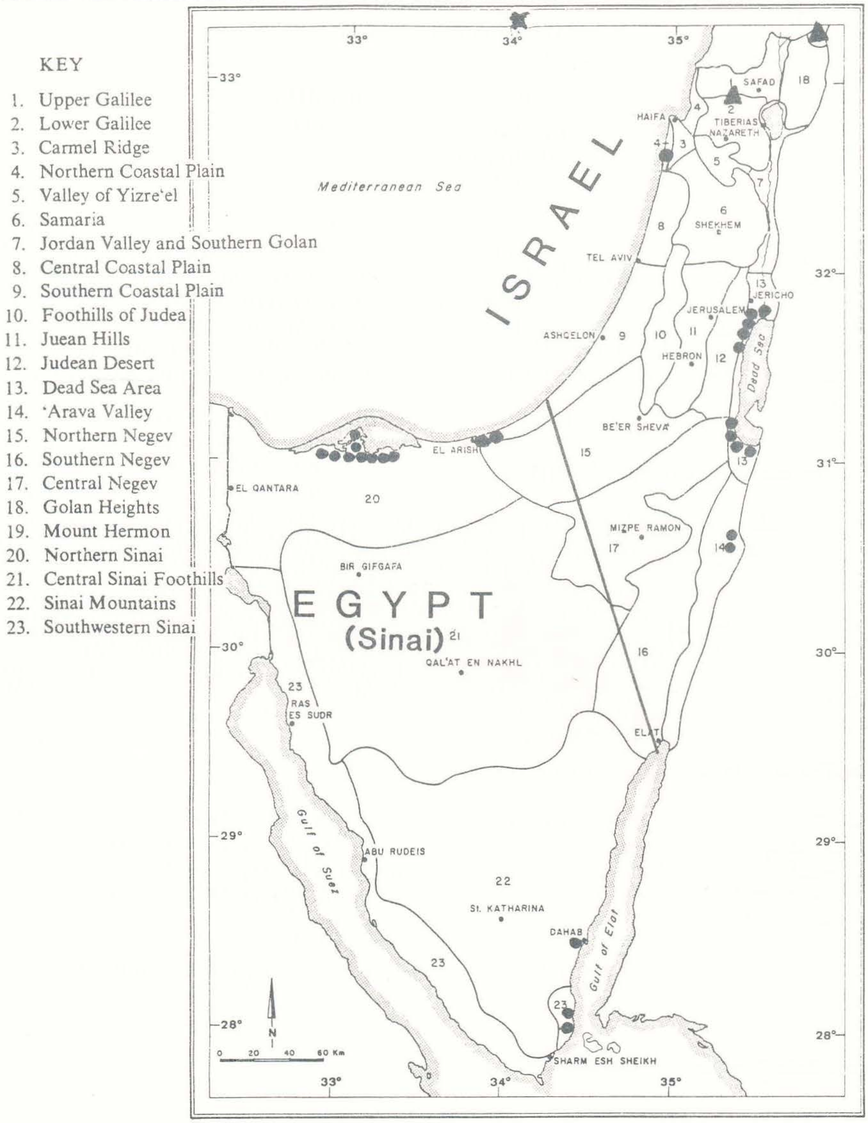
Distribution: This subspecies is endemic to Israel. The nominate form, C. contorta contorta, occurs from Egypt to the Caspian Sea (Persia and Russia). C. c. valdenbergi in Israel is known from maagan-michael (a large population), Akka (Argaman - beach), Eweq Zevulum, Zerufa beach and Quesarya. (Fig. 2)

Bionomics: Common on sandy beaches. Adults are active from May until the middle of November.

Cicindela (Cephalota) tibialis Dejean

Distribution: Egypt. In the Sinai it has been found in Sabkhat-El-Bardawill and Sabkhat-El-Shic. Not known to occur in Israel (based on current boundaries). (Fig. 3)

Bionomics: Common on sandy beaches. This species will fly to light traps. Adults are active from the middle of May until September.


KEY

1. Upper Galilee
2. Lower Galilee
3. Carmel Ridge
4. Northern Coastal Plain
5. Valley of Yizre'el
6. Samaria
7. Jordan Valley and Southern Golan
8. Central Coastal Plain
9. Southern Coastal Plain
10. Foothills of Judea
11. Juean Hills
12. Judean Desert
13. Dead Sea Area
14. 'Arava Valley
15. Northern Negev
16. Southern Negev
17. Central Negev
18. Golan Heights
19. Mount Hermon
20. Northern Sinai
21. Central Sinai Foothills
22. Sinai Mountains
23. Southwestern Sinai

Figure 1. Distribution of Cicindela campestris herbacea (L.) (▲) and Megacephala euphratica Dejean and Latreille (●) in Israel and the Sinai (Egypt).

Cicindela (Cephalota) jarudniana Tsch. (ssp. **vartinorum** ?)

Distribution: Persia, Syria, Iraq, and Israel. In Israel it is found in Qalya and in Neot - Hakikkat. (Fig. 4)

Bionomics: This species is active in April and May.

Cicindela (Cephalota) littorea Forsk

Distribution: Sinai (Egypt), coast of Red Sea at Ras-Muhammad, Nabk, Dahav and the sun-pool.

Bionomics: Adults are active from May to September. This species will fly to light traps.

Cicindela (Myriochile) melancholica Fabricius

Distribution: southern Europe, all of Africa, Madagascar, Middle East, Pakistan and India. In Israel it is found along the Mediterranean coast, in the central Negev (Yeroham, Beer-Sheva, Qziot and Ezuz), and in the Jordan Valley from Dan to Neot-Hakikkar. (Fig. 5)

Bionomics: This species is a eurybion, occurring on clay soils near streams, small pools, seweage ponds, and also on slat flats. Adults are active from April to October.

Cicindela (Lophyra) flexuosa flexuosa Fabricius

Distribution: Mediterranean region - France, Spain, Italy, Greece, Syria, Morocco, Algeria, Tunisia, Libya, Israel, and Egypt. In Israel it is found along the Mediterranean coast from Ak'ka to the Gaza Strip, in northern Negev (Yeroham), central Negev (Kades-Barnea), and the northern Sinai (Sabkhat-El-Shic). (Fig. 6)

Bionomics: Occurs on sandy soils near streams and small pools. Adults are active from February until June.

Cicindela (Lophyridia) aulica (Dejean)

Distribution: Greece, Israel, Egypt, Yemen, Saudi Arabia, Pakistan, Sudan, Ethiopia and Senegal. In Israel it is found on the Dead Sea coast (Eynot-Kane); its is known from the northern Sinai (Bardawill, and abkhat-El-Shic) and the southern Sinai (Ras-Muhammad, Nabk, and A-tur). Adults are active from May to September. (Fig. 2)

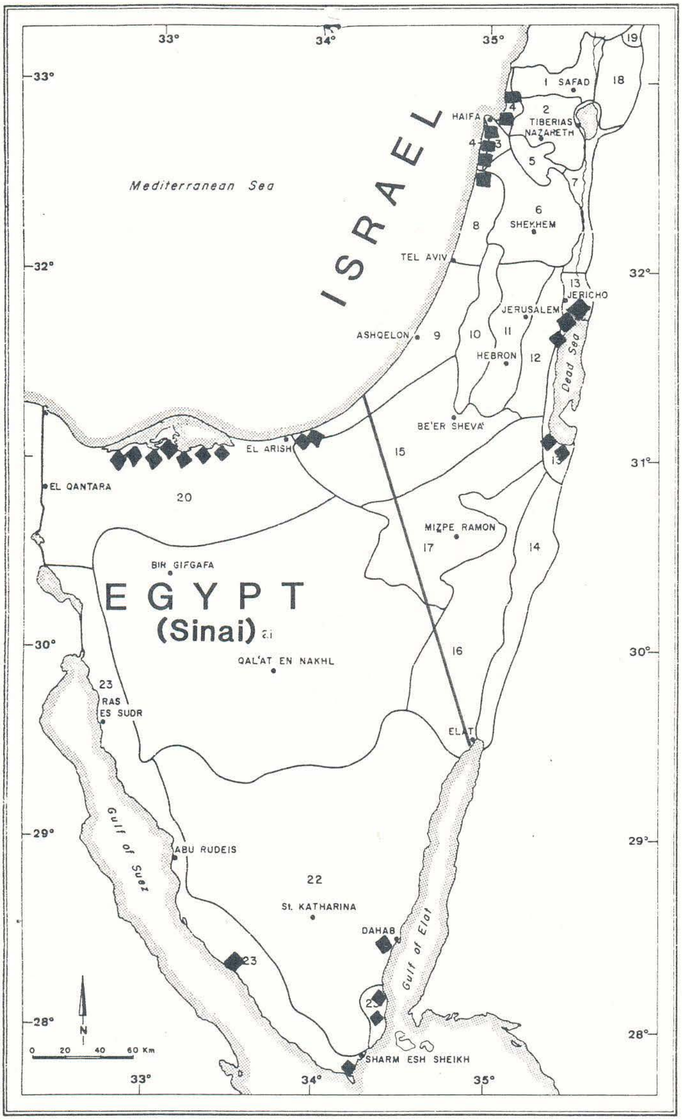


Figure 2. Distribution of Cicindela (Cylindera) contorta vandenbergi (Mandl) (■) and Cicindela (Lophyridia) aulica (Dejean) (◆) in Israel and the Sinai (Egypt).

Cicindela (Lophyridia) littoralis Fabricius

Distribution: Atlantic coasts of Europe and Morocco, Mediterranean coast, Red Sea coast, Iran, Iraq, Saudi Arabia and China. Two subspecies occur in Israel.

Cicindela l. winkleri (Mandl) - occurs in Syria, northern Persia and northern Iraq as well as Israel. In Israel it is found along the Mediterranean coast from the mouth of the Bezet River to the mouth of the Shigma River (especially the Naamn River, Khison River, and Menash Reservoir). (Fig. 4)

The adults are common on sandy beaches, especially near rivermouths, and also near salt flats. Adults are active from the middle of February until November.

Cicindela l. aulicoides (Sahl) - occurs in Mesopotamia, Saudi Arabia, and Israel. In Israel it is found on the Dead Sea coast (Eynot-Kane, Qalia), in the Jordan Valley (Tomer and Moaz-Haiim), and the Kineret Zone (Biqat-Beit-Zayda, and H'aon). (Fig. 3)

Adults are active from March to September.

Cicindela (Hypaetha) singularis Chaudoir

Distribution: Sinai (Egypt), Red Sea coasts in southern Sinai (Ras Muhammad and Nabek).

Megacephala euphratica (Latreille & Dejean)

Distribution: Spain, North Africa, Egypt, Yemen, south Russia, Iraq, Iran, Israel, Cyprus, Crete, and Rodi Island. In Israel it is found along the Dead Sea coast (Neot-Hakikkar, Kalia, Navit pools, and Zohar salt flats), Arava (Hazeva), and Atlit salt pools. It also occurs in the southern Sinai (Nabek and Dahav) and the northern Sinai. (Fig. 1).

Bionomics: This species will also come to lights. The adults are active from March until June.

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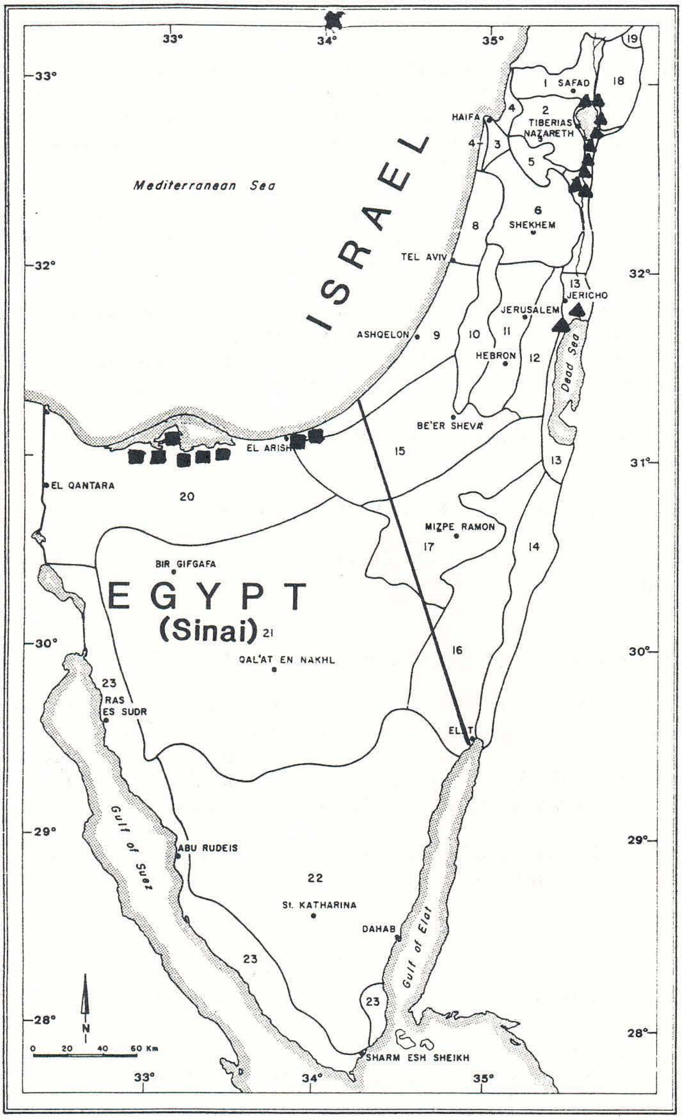

Figure 3. Distribution of *Cicindela* (*Cephalota*) *tibialis* Dejean (■) and *Cicindela* (*Lophyridia*) *littoralis aulicoides* (Sah.) (▲) in Israel and the Sinai (Egypt).

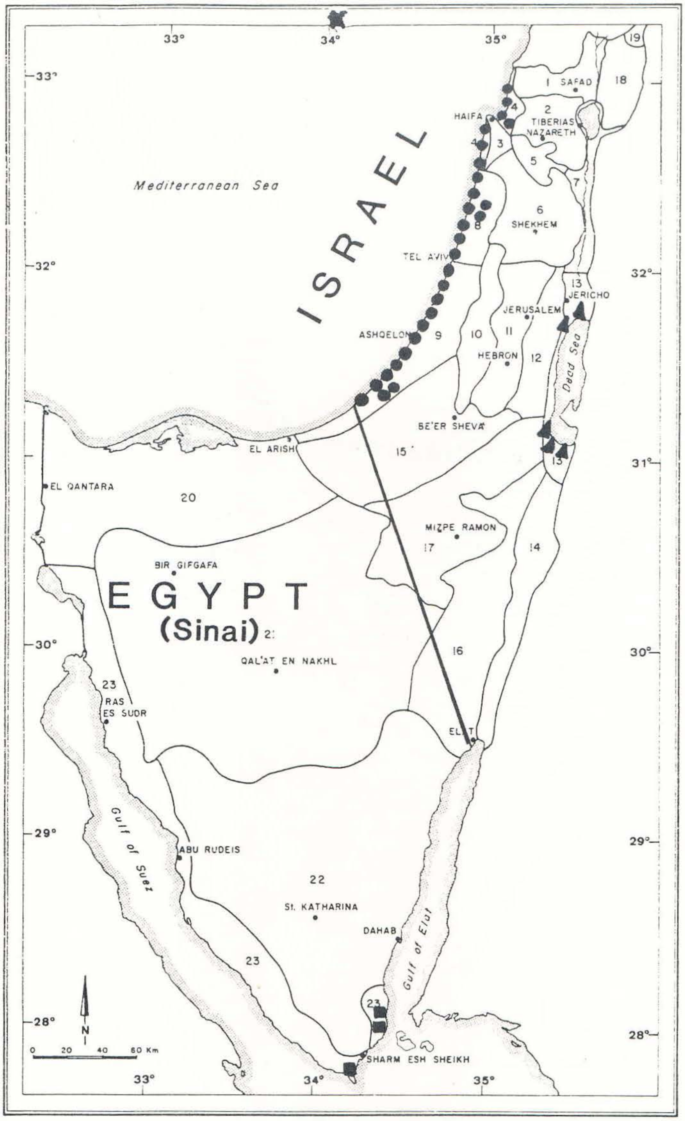

Figure 4. Distribution of Cicindela (Lophyridia) littoralis winkleri (Mandl) (●), Cicindela (Cephalota) jarudniana Tsch. (▲) and Cicindela (Hypaetha) singularis Chaudoir (■) in Israel and the Sinai (Egypt).

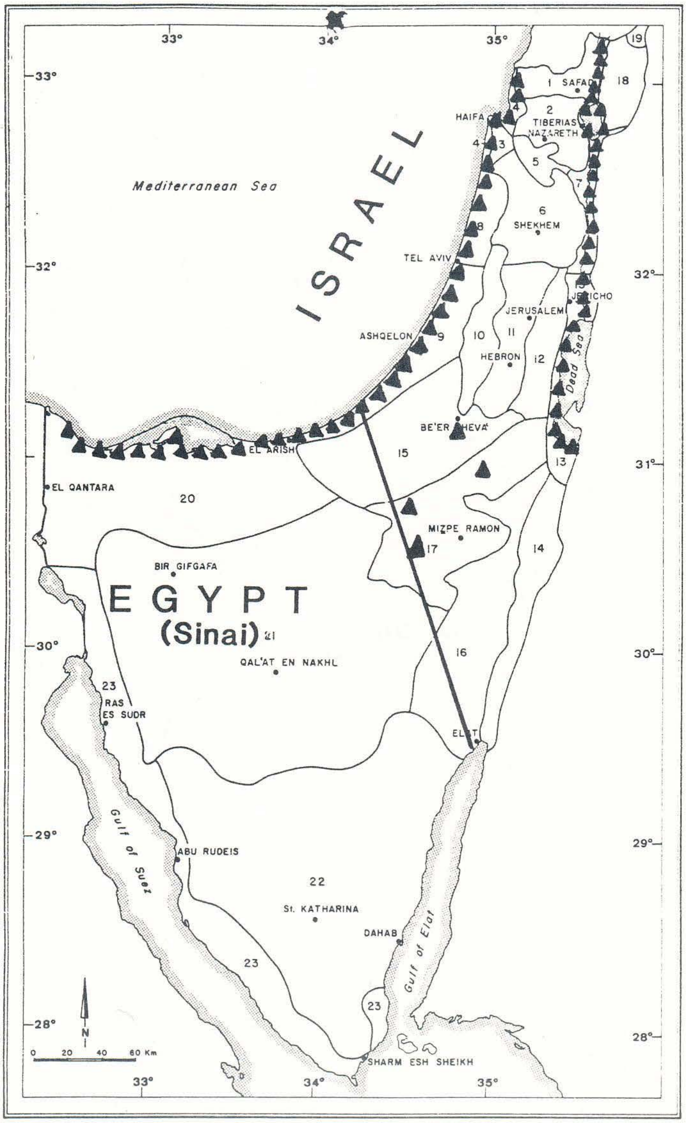

Figure 5. Distribution of Cicindela (Myriochile) melancholica Fabricius in Israel and the Sinai (Egypt).

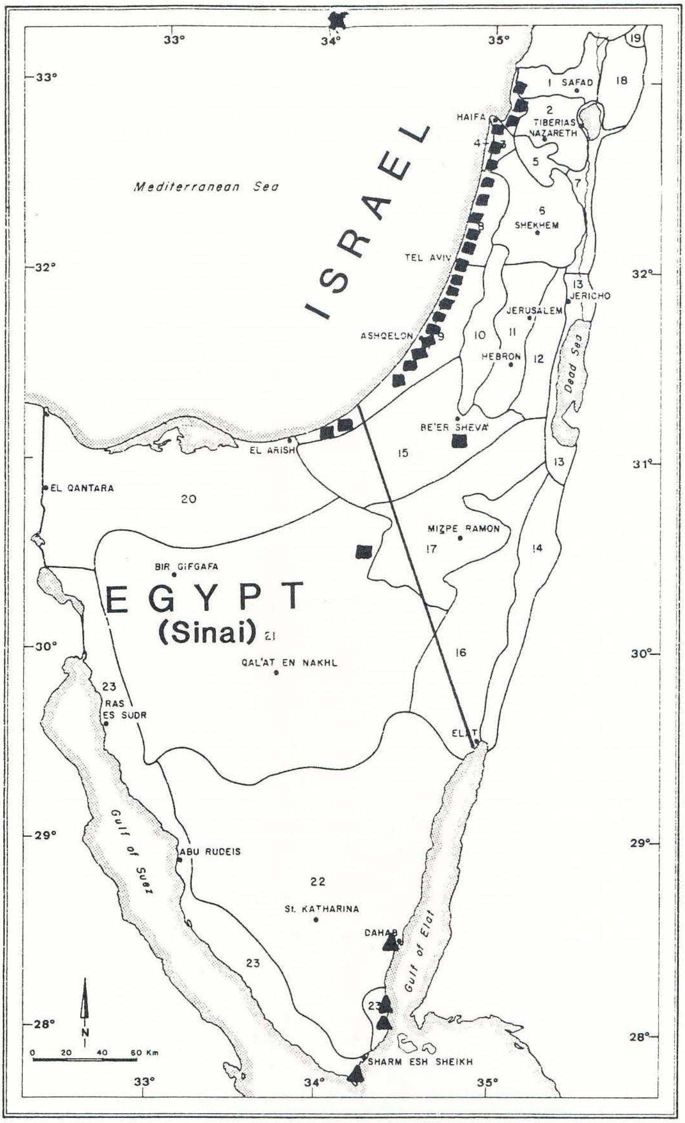

Figure 6. Distribution of Cicindela (Lophyra) flexuosa Fabricius (■) and Cicindela (Cephalota) littorea Forsk (▲) in Israel and the Sinai (Egypt).

"Beauty and the Beast"

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The title of this article should really be the beast and the beauty, because it is a story about an antlion I once kept as a pet.

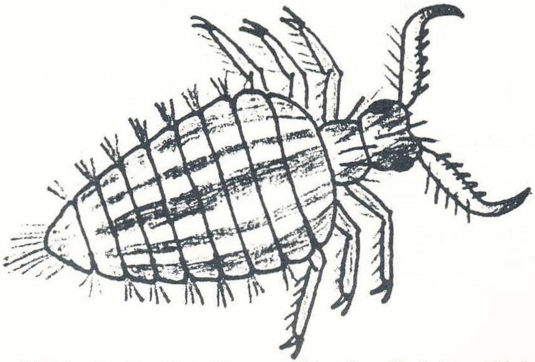
We spotted the small funnel-shaped homes of some antlions while hiking near Cumberland Falls, Kentucky, USA. We had a good time throwing in ants and watching how the antlions ate them, but then the hiking party moved on and this brought an end to our activities.

A few days later at Laurel Lake, also in Kentucky, we again spotted antlion "funnels" in the sandy soil, but this time we were able to collect some. Upon returning to the house I put two larvae in a margarine bowl filled with sand. The next day there was one funnel in the sand. The second larvae was never seen again, and was presumed dead!

Now the fun began! I decided to experiment with my "eating machine" or "doodlebug", and so I began looking for ants. I found some and headed back to the porch where I kept my antlion. After throwing in the ant I discovered that it took a great deal of activity on the part of the ant to arouse the antlion's interest. Once aroused, the antlion began flipping dirt at the ant so as to knock it down. The antlion flipped its spoon-shaped head like a catapult. The doomed ant ultimately fell to its death.

Over a period of 4 or 5 days the antlion ate 6 ants a day. Then our vacation was over in Kentucky, and we had to return to Sterling Heights (near suburban Detroit), Michigan, USA. Once back in Michigan I really had to scrounge to find any ants, and since I couldn't find too many I had to supply other things as food. Over the next two or three weeks the antlion ate ants, potato bugs, flys and spiders.

At the end of this period the funnel was in a shambles and the occupant wasn't eating, so I decided to investigate. All I found was a perfectly shaped dirt sphere at the base of the old funnel. I had read in a book that antlions spun cocoons in which they turned into the adult stage. So I put the sphere in a new container, and sure enough an adult antlion emerged about a month later! The adult antlion is very beautiful, and it sort of looks something like a dragonfly with a small head, large eyes and a long, slender abdomen. The wings were membranous and with many criss-crossed veins. This was the beauty of the beast.



Antlion larva, illustrated by Dan Kersey, Sterling Heights, Michigan, USA

Insects and Artwork

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San Cristobal, Tachira
VENEZUELA

Did you know that every design has a story to tell? I know you did, but not always do we know what every part of a design signifies.

Let's look at two. In the first drawing (fig. 1) you can see an insect bearing the letters UNET. The challenge for designing this logo was to pick an insect typical of Venezuela and that had a shape that leant itself to the University initials - UNET. These initials stand for Universidad Nacional Experimental del Tachira (National Experimental University of the State of Tachira). After looking at several insects I decided on the beetle Stenodontes molarious Bates (Coleoptera: Cerambycidae). The design now promotes entomology within the University as well as the University itself. So far the logo has been used on T-shirts an small banners.

In the second drawing (fig. 2) you see another insect, this time bearing the letters CVE. The story behind it is the following: Venezuela's Entomological Society (S.V.E. = Sociedad Venezolana de Entomologia), founded in 1964, was holding its IX (ninth) meeting in San Cristobal, State of Tachira, from 1-4 July 1985. Each of the meetings has always represented by a typical design (one selected from several), which is then reproduced on posters, stickers, T-shirts, and other articles related to the meeting. The winning design chosen was of a male dung beetle, Sulcophanaeus auricollis joffrei Martinez. It was selected by its authors because it was a new subspecies and was recently found in the State of Tachira; and also, the shape of its body allowed the letters CVE (Congreso Venezolano de Entomologia, or Venezuelan Congress of Entomology) to be drawn in. The background the lines represent the Andes Mountains which form an important part of Tachira. In the top left corner the number IX was placed to identify the Congress, and in the bottom right corner the emblem of the University to identify the meeting location.

There are many other entomological logos and designs around. Do you have a favorite? Do you now the story behind other entomological designs, or can you create your own? Please, share them with us!

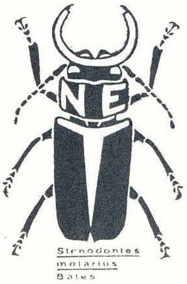

Fig 1.

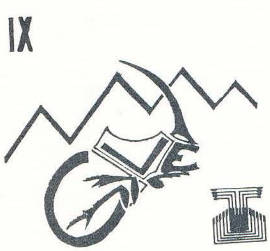

Fig 2.

Insect Collectibles - A New Pursuit For Entomologists

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Many amateur and professional entomologists have their own personal collection of insects. Some collections are very meager while others fill several cabinets. Some are general in nature while others specialize in a particular family or genus. Collection of these live insects may have been easy of difficult, depending on the life history and abundance of the groups, but these efforts are small in comparison to collecting INSECT FACSIMILES.

The public generally dreads all insects, especially those in their home. Neither beneficial or destructive insects are discriminated against. All are killed on sight. Because of this phobia against insects, relatively few toys, figurines, or art objects are patterned after insects. Within recent years, amphibians (frogs), mammals (dogs, elephants, pigs, horses, cows, etc.), and birds made of pottery, glass, and ceramics have become popular as gifts and collectibles, but insects are poorly represented. Insects are grossly neglected and under rated when you consider that they comprise the most numerous and diverse group of animals on earth. Within the last three years some of my leisure time has been spent accumulating a collection of objects patterned after insects.

The most frequently encountered arthropods represented as inanimate objects are those which are showy (butterflies), cute (ladybird beetles), and frightening (flies and spiders). These and other arthropods may be molded out of rubber, plastic, wood, metal, fabric, or clay. They may be sold as decorations, Christmas ornaments, tricks, jewelry, toys, or art objects. Figure 1 illustrates some of the rubber insects available as toys or for jokes. They range in size from one-half to 7 inches in length. Rubber insects are also sold as dog toys (fig. 2). More unique arthropods made of plastic are illustrated in figure 3, while figure 4 shows plastic insects with rubber suction bulb abdomens that are water squirt toys. Another category, children's stuffed toys, are fashioned after the more popular cute and colorful insects (fig. 5). Many plastic and metal wind-up toys also mimic insects (fig. 6). Included in this category are the now-popular robot convertibles, toy insects that convert into robots (fig. 7). Wood and metal (usually brass; fig. 8) insects are sold more as decorative art objects for the home. Lastly, a few of the more unusual insect objects are shown in figure 9. Thus far, I have amassed a collection of 68 insects and other arthropods, representing 33 different families. See how many you can collect, and don't forget to take along your killing jar.

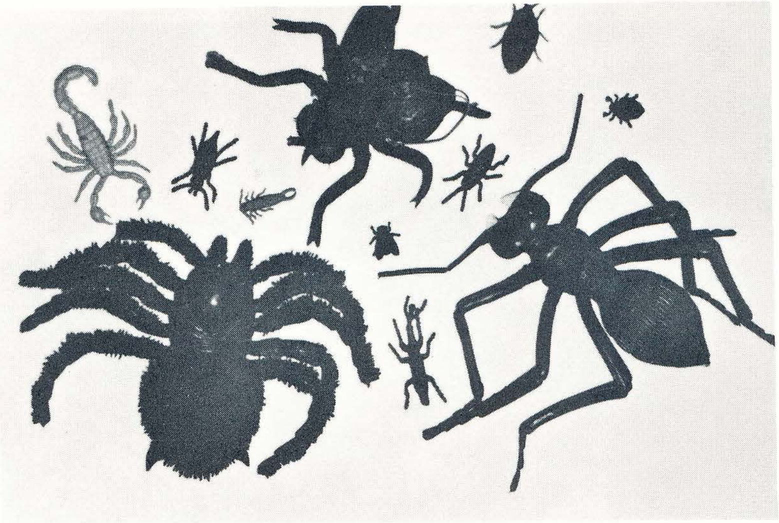


Figure 1. Rubber insects (clockwise): spider, earwig, blister beetle, scorpion, fly, cockroach, beetles, ant, and weevil.

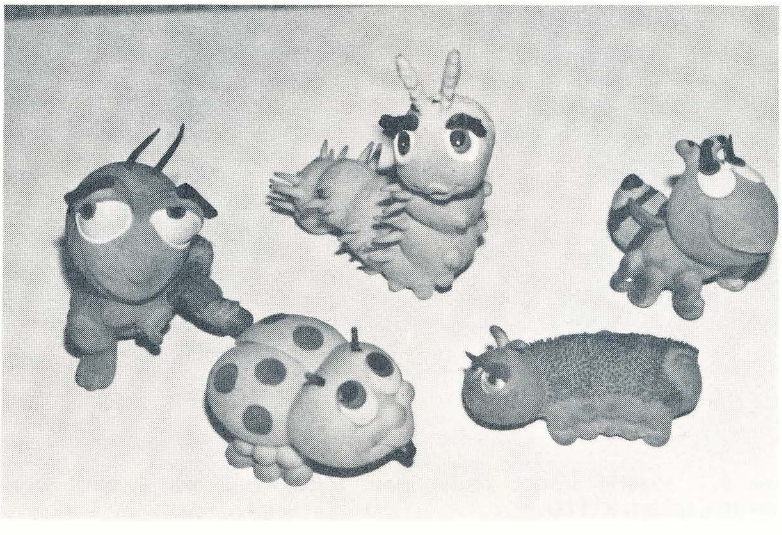


Figure 2. Rubber dog toys (clockwise): honeybee, caterpillar, ,leaf beetle, cricket, and caterpillar

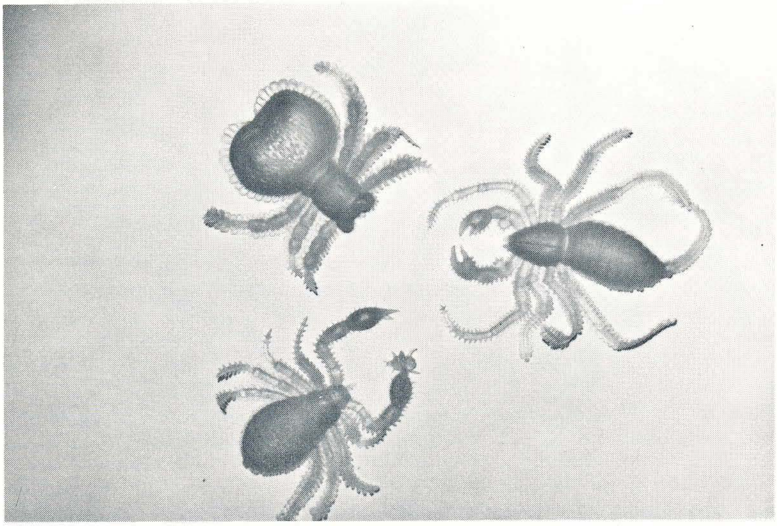


Figure 3. Plastic arthropods: whip scorpion, pseudoscorpion preys on mite, and louse.

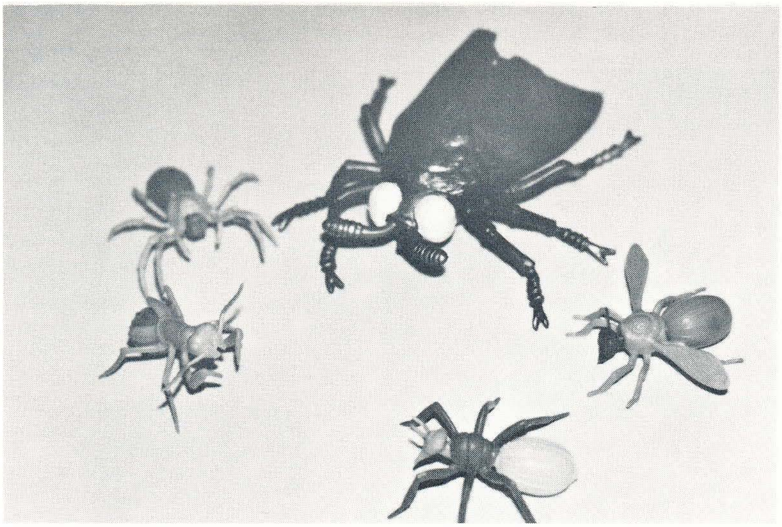


Figure 4. Plastic insect squirt guns (clockwise): wasp, ant, praying mantis, spider, and fly

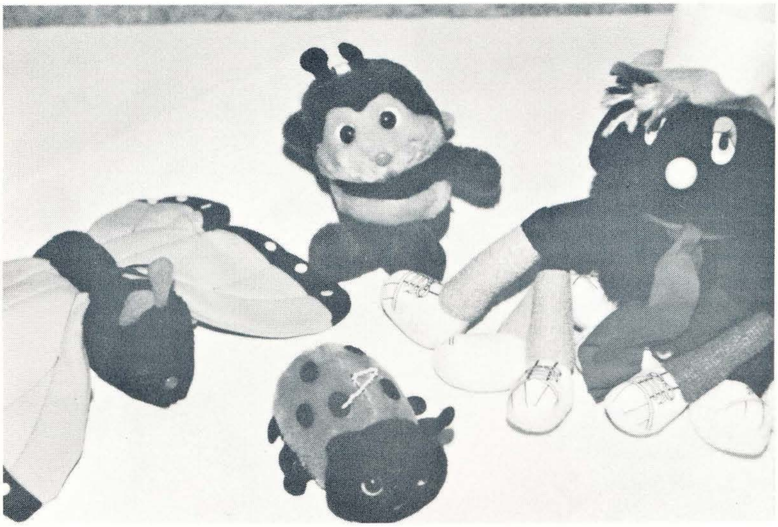


Figure 5. Stuffed insect toys: spider, ladybird beetle, butterfly and honeybee.

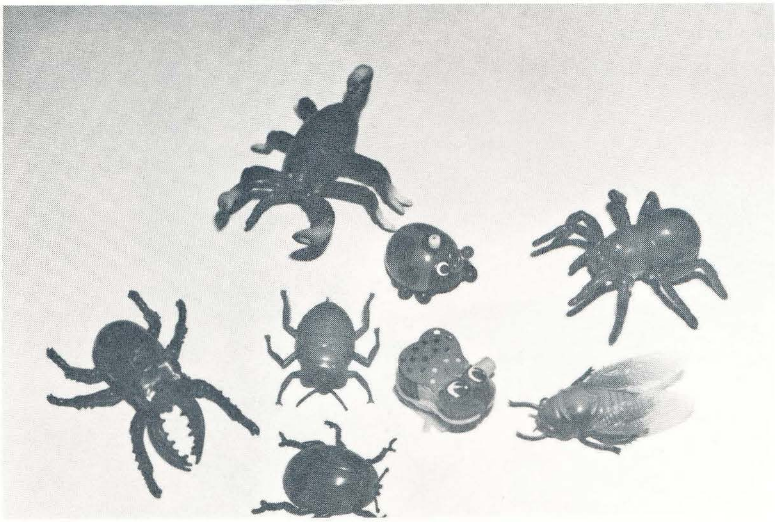


Figure 6. Popular wind-up creatures (clockwise): tarantula, cicada, honeybee, leaf beetle, stag beetle, bed bug, scorpion, and ladybird beetle.

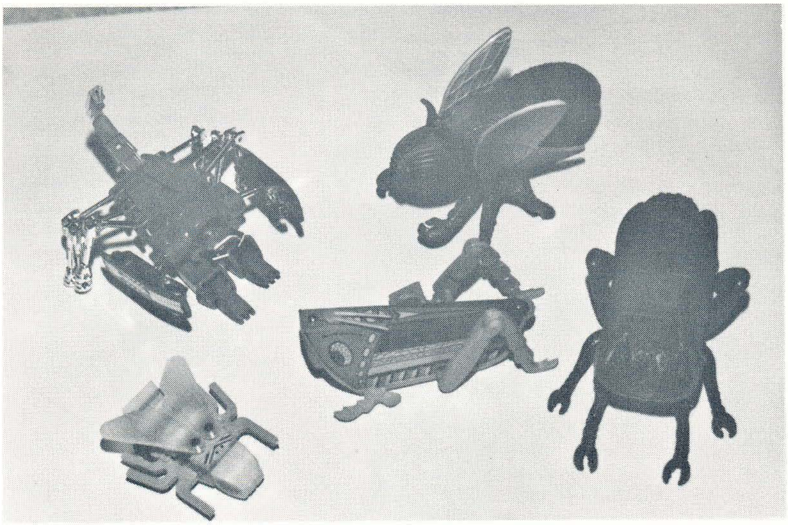


Figure 7. Other toy insects (clockwise): Wicked cricket (TM), grasshopper, honeybee-robot convertible, scorpion-robot convertible, and Blooderfly (TM).

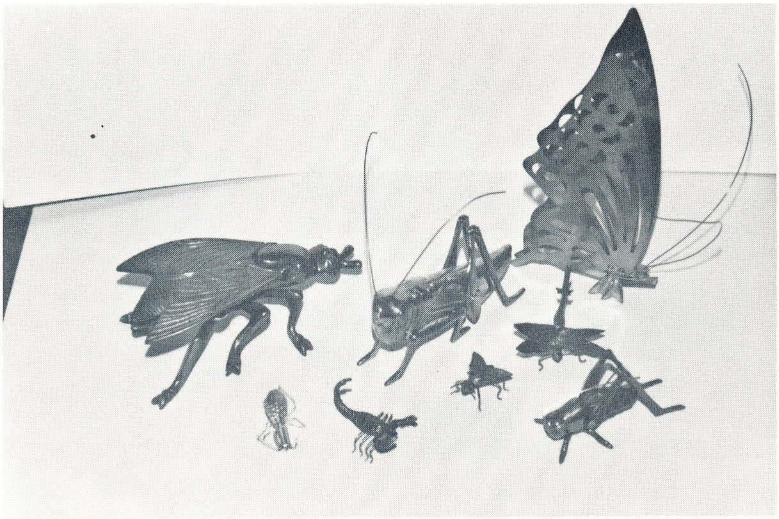


Figure 8. Brass bugs (clockwise): butterfly, dragonfly, cricket, fly, scorpion, weevil, fly, and cricket.

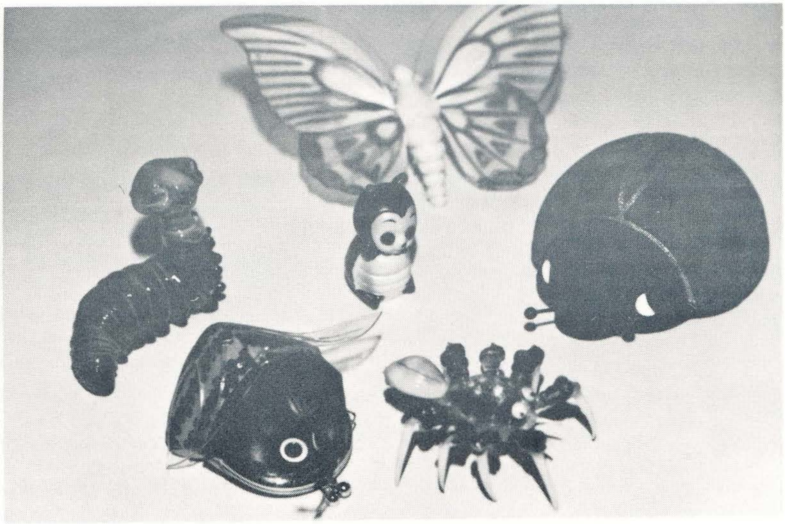
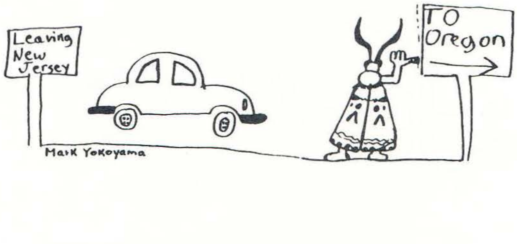


Figure 9. Unusual insect objects (clockwise): ladybird beetle coin bank, spider made of seashells, beetle change purse, ceramic caterpillar and honey bee, and a silk butterfly.



Cartoon by Mark Yokoyama, Corvallis, OR

A Study of Mosquitoes and Their Attraction to Color

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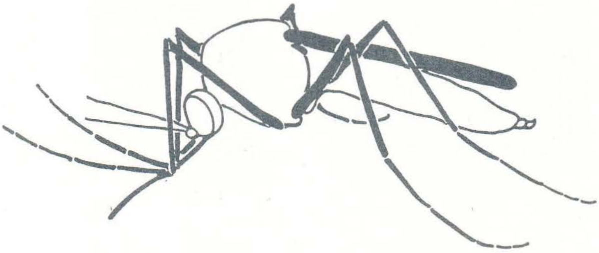
This was a study to determine which of three colors is most attractive to mosquitoes. The three colors chosen were pink, black, and sky blue.

First, I went outside in a pink T-shirt. I stood for two minutes and counted the number of mosquitoes within one foot of me. I then repeated this process two more times, once wearing the blue T-shirt and once wearing the black T-shirt.

The results were as follows:

Color of Shirt	Number of mosquitoes
pink	6
blue	11
black	8

From this experiment I have drawn the conclusion that mosquitoes are more attracted by blue than they are by black or pink.



Collecting Cicindelidae in West Africa and India (Coleoptera)

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WEST GERMANY

In 1986 I made two trips for the purpose of collecting Cicindelidae (tiger beetles). The first trip was to Ghana and Togo (west Africa) in March and April. I traveled around these countries in a VW van and I was able to collect 10 different species of tiger beetles.

In July and August I went to northern India and collected in the foothills and passages near the Himalayas. The little city of Rishikesh, located on the upper course of the Ganges River, turned out to be a real paradise for cicindelid collecting. I was able to collect 24 species of tiger beetles while in India.

LIST OF SPECIMENS COLLECTED

1. WEST AFRICA (city names should be regarded as "vicinity of")

Habrodera nilotica Dejean
TOGO: Togoville, iii/iv-1986, 22 females & 38 males taken on open sandy beach of Lake Togo

Lophyra neglecta Dejean (s. str.)
TOGO: Togoville, iii-1986, 2 females & 6 males taken on sandy beach of Lake Togo; Kpalime, iii/iv-1986, 10 females & 9 males taken on sandy soil near puddles; GHANA: Kumasi, iv-1986, 4 females & 9 males taken along paths in open fields; Bechem, iv-1986, 3 females and 5 males taken along paths in open fields

Lophyra luxeri Dejean
TOGO: Plateau des Dayes, iii-1986, 1 female collected at blacklight; GHANA: Hohoe, iv-1986, 2 females and 5 males taken on hard, dry loamy path through reeds; Kumasi, iv-1986, 1 female & 1 male taken at blacklight; Sunyani, iv-1986, 1 male taken at blacklight

Lophyra senegalensis Dejean
TOGO: Togoville, iv-1986, 1 female taken along shady path under palm trees

Myriochile melancholica F.
TOGO: Togoville, iii-1986, 3 females & 1 male taken on sandy beaches among reeds; Kpalime, iii-1986, 1 male at blacklight; GHANA: Akosombo-dam, iv-1986, 2 females & 4 males taken on loam soil in a gravel pit; Bechem, iv-1986, 1 female taken on a sandy path through reeds

Myriochile fastidiosa vicina Dejean

GHANA: Bechem, iv-1986, 9 females & 6 males taken on sandy paths between fields and very tall grass; Kumasi, iv-1986, 10 females & 6 males taken on sandy paths between fields and very tall grass

Rhopalotheres cinctus Olivier

TOGO: Kpalime, iii-1986, 3 females & 14 males taken on narrow paths in forest; GHANA: Kumasi, iv-1986, 3 females & 6 males taken on narrow paths in forest; Bechem, iv-1986, 1 female & 1 male taken on narrow path in forest; Sunyani, iv-1986, 1 female & 2 males on narrow path in forest

Rhopalotheres nysa Guerin

GHANA: Hohoe, iv-1986, 6 females & 6 males taken on a narrow, shady path through reeds; Sunyani, iv-1986, 2 females & 1 male taken at blacklight; Bechem, iv-1986, 2 females & 2 males taken at blacklight; TOGO: Kpalime, iii-1986, 1 female & 1 male at blacklight

Cylindera octoguttata Fabricius

TOGO: Kpalime, iii-1986, 22 females & 23 males taken along a sunny path next to a jungle stream; GHANA: Hohoe, iv-1986, 4 females & 3 males taken on damp, sunny path in forest

2. NORTHERN INDIA

Cylindera erudita Wied. (fig. 1)

Rishikesh, vii/viii-1986, 26 females & 19 males taken among grass plants on sandy riverbank far from water; Jammu (Kashmir), vii-1986, 10 females & 7 males taken among grass plants on sandy riverbank far from water

Cylindera cognata Wied. (fig. 2)

Rishikesh, vii-1986, 1 male taken along with C. erudita

Cylindera grammophora Chaudoir (fig. 3)

Rishikesh, vii/viii-1986, 5 females & 13 males taken at night on walls illuminated by neon tubes; Jammu (Kashmir), vii-1986, 3 females & 5 males taken at lights

Cylindera decempunctata Dejean

Rishikesh, vii-1986, 2 females & 2 males taken at neon lights at a filling station

Cylindera agnata Fleut. (fig. 4)
Ramnagar, vii-1986, 2 females taken on sandy riverbanks

Cylindera minuta Olivier
Ramnagar, vii-1986, 1 female taken along with *C. agnata* and *Lophyridia sumatrensis*

Cylindera viridilabris Chaudoir
New Delhi, viii-1986, 2 females & 2 males taken on damp, sandy soil in an uncultivated city park

Cylindera venosa Kollar (fig. 5)
Rishikesh, vii-1986, 3 females & 20 males taken on sandy riverbanks, at the water's edge; also at neon lights at night

Lophyridia sumatrensis Herbst (s. str.) (fig. 6)
Rishikesh, vii-1986, 5 females & 3 males taken along with *C. venosa* on sandy riverbanks; Ramnagar, vii-1986, 13 females & 5 males in company with *C. agnata* and *minuta* on riverbanks

Lophyridia chloris Hope (s. str.) (fig. 7)
Rishikesh, vii/viii-1986, 2 females & 3 males taken on stoney riverbanks; Ramnagar, vii-1986, 4 females and 3 males taken on stoney riverbanks; Jammu (Kashmir), vii-1986, 1 male taken on a stoney riverbank

Lophyra multiguttata Dejean
Rishikesh, vii/viii-1986, 23 females & 40 males taken on sandy riverbanks in passages from open to overgrown areas

Lophyra striolata Illiger (fig. 8)
Rishikesh, vii-1986, 1 male taken among the abundant individuals of *L. multiguttata*

Lophyra striatifrons Chaudoir (fig. 9)
Rishikesh, vii/viii-1986, 6 females & 5 males taken on firm, dried sandy soil at a distance from the river

Jansonia tetrastracta Weid.
Rishikesh, vii/viii-1986, 9 females and 6 males taken at lighted walls

Calochroa sexpunctata Fabricius
Rishikesh, vii/viii-1986, 10 females & 7 males taken at various light sources (they were never encountered in the day, even though I searched for them)

Calochroa octonotata Wied.
Rishikesh, viii-1986, 25 females & 15 males taken near a small river deep in the jungle where they were found on leaves, stones and fallen trees just above the water level; this has to be the prettiest tiger beetle I have ever seen

Cosmodela virgula Fleut.
Rishikesh, vii/viii-1986, approx. 60 females & 50 males taken on narrow, shady paths through the jungle

Cosmodela intermedia Chaudoir
Rishikesh, vii/viii-1986, 11 females & 14 males taken with C. virgula, but tending to occur in more open places

Rivaliera albina Wied. (fig. 10)
ishikesh, vii-1986, 7 females & 8 males taken on sandy riverbank; they were only present on two days and then I never saw them again

Rhytidophaena feai Gestro
Rishikesh, viii-1986, 1 male taken at light on a wall

Pseudochaetodera vigintiguttata Herbst (fig. 11)
Rishikesh, vii-1986, 2 females taken at lights, one on a neon tube and the other on a yellow streetlamp

Neocollyris variitarsis Chaudoir
Rishikesh, vii-1986, Dharamsala (2400m), vii-1986, 4 females & 3 males taken on leaves at the edge of a forest

Neocollyris crassicornis Dejean
Rishikesh, vii/viii-1986, 5 females & 1 male taken on leaves near a river (swampy ground)

It must be said that the specimens of Lophyra senegalensis taken in Africa and the Cylindera venosa, Rivaliera albina, and Calochroa octonotata taken in India were very near impossible to capture. You really have to work hard to catch these species, to the extent that you are often only successful in your efforts 20% of the time! But this certainly increases the pleasure you feel when you finally get one in your net.

Acknowledgements

Special thanks are in order for Mr. Jurgen Weisner of Wolfsburg, West Germany, who was able to identify all of the material I collected. I also would like to thank Mr. Michael Hiermeier of Munich, who assisted me in Africa, and Mr. Anton Richter of Kempton who assisted me with locating good collecting sites in India.

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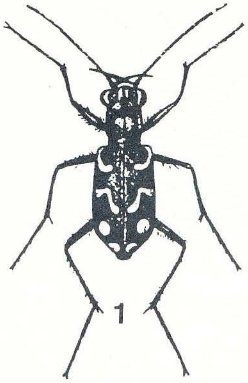
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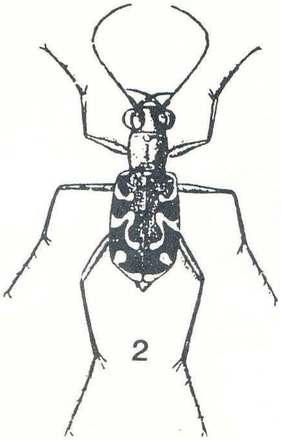
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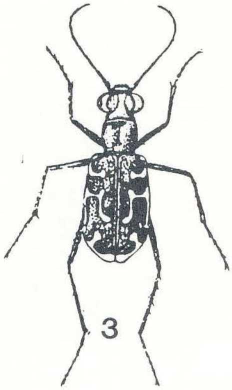
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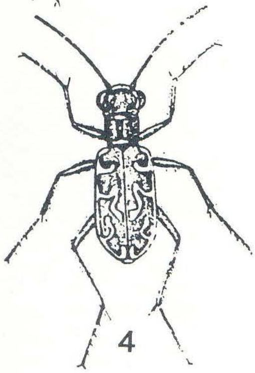
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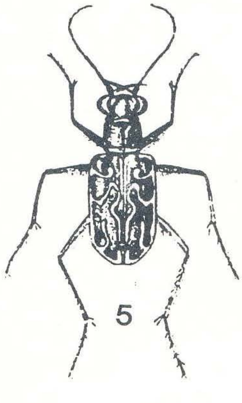
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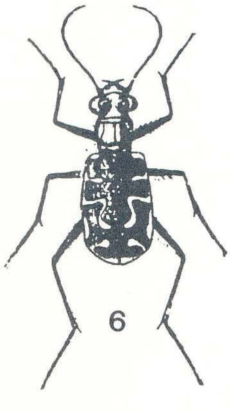
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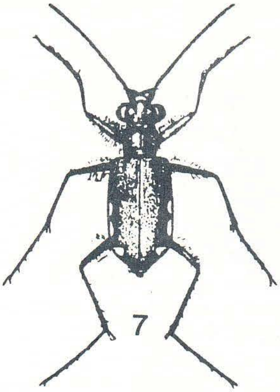
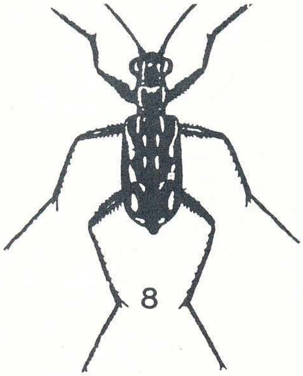
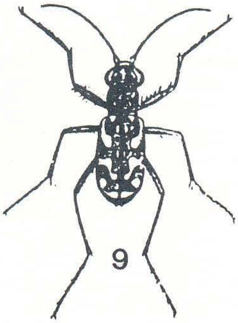
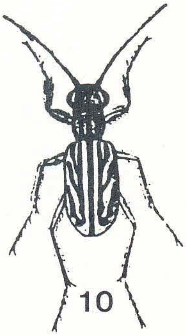
Figures 1 - 6

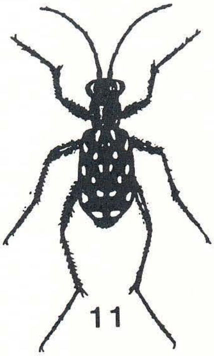
Fig. 1. Cicindela crudita
Fig. 2. Cicindela cognata
Fig. 3. Cicindela gramatophora
Fig. 4. Cicindela agnata
Fig. 5. Cicindela venosa
Fig. 6. Cicindela sumatrensis











Figures 7 - 11

Fig. 7. Cicindela chloris
Fig. 8. Cicindela striolata
Fig. 9. Cicindela striatifrons
Fig. 10. Cicindela albina
Fig. 11. Cicindela vigintiguttata

Insects Bites and Allergies

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Three groups of insects will be considered in this article: bees, ants, and mosquitoes.

In North America, bees are probably the most dangerous of these three backyard insects. When a honey bee leaves its stinger in the skin, a little sack of venom goes along with it. The muscles of this little sack continue pumping venom into the wound. If you are stung, the first thing to do is get the stinger out by scrapping it with a knife or fingernail. (Do NOT squeeze it!). Then wash the skin with soap and water. It might also help to apply an ice pack to reduce any swelling, and a baking soda paste to reduce the pain. If you are allergic to bee stings you will need to use a special insect sting kit. If a kit is not available, get medical help immediately because this could develop into a life-threatening situation.

Most ants can bite, but a few species like the fire ants have a vicious sting. Learn to avoid ant hills, and keep feet and arms protected (that's where the ants are most likely to sting). If allergic symptoms develop seek medical help immediately.

The mosquito is a small, fragile insect. Mosquitoes come in various sizes and colors, but they all have round heads and slender antennae. Mosquitoes seek blood as a food for their eggs. The blood nourishes their young until they hatch from the eggs. Mosquito bites should be washed with soap and water. This is because mosquitoes carry bacteria that can cause an infection. If there is swelling, use an ice pack. Don't scratch the bite, because your fingernails can be a source of infectious bacteria too.

Symptoms of allergic reactions to insects bites include dizziness, nausea, hives, rashes, abnormal swelling, irregular breathing or headaches. If you are in doubt about whether or not you are experiencing an allergic reaction, don't take chances - seek medical assistance immediately. Allergic reactions to insects bites or stings can be life threatening!

Venezuela

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VENEZUELA

Do you like travelling? I love visiting new places! But do we always know where or to what we are heading? I have had many good and bad surprises! I would like now to share with you some general information and experiences.

I am an entomologist living in the town of San Cristobal, Venezuela. Do you know where that is on the map? I know you do, but let us look it up in a world atlas just to be sure. What other countries (and sea) surround Venezuela? Good, you know all that. All this is important to get things into perspective. Now observe the map of Venezuela (fig. 1); you can see it is divided into states, each with a capital city. Can you find San Cristobal? Yes, it is the west, and it is where I live and work at the local university (Universidad Nacional Experimental del Tachira).

Venezuela has 912,050 sq. km and the state of Tachira 11,100 sq. km. From its position on the map you may be able to deduce that it is a tropical country. Because of the large area occupied by Venezuela it has many different habitats including deserts, jungles, low and high mountains, and infinite plains.

If you wish to visit this country, as it is an entomologist's paradise, be sure that you plan your visit well. It is a beautiful country, but remember that it is still developing so things may not always happen as you imagine they should. I would suggest learning Spanish, even in its simplest form. Second, if you do not have friends here who could take you around, learn the country's geography and something about the culture. For example, last year I was asked to help in a court case when two Swiss boys (20 years old), who did not know any Spanish or anything about the different localities, ended up in a cocaine selling area and got mixed up with drugs and spent nine months in prison instead of enjoying a lovely vacation.

In the way of transport, this country has two main international airports, one in Caracas and the other in Maracaibo. There are national flights to most states. Nearly all the roads are paved and there is regular bus service. In the towns you will find good bus-routes, car-routes, and taxis. It is also good to get your own road map and town maps so you know exactly where you are.

Remember to travel light, but do take everything that you think you will absolutely need, especially when it comes to entomological equipment. You might not be able to buy it when you get here. It is important to get all the professional advice possible before you leave, but do not let your imagination get the best of you by worrying about all the terrible things that could happen to you. I would also suggest that you never travel alone; your friend could be an incredible help, especially when on a field trip in a foreign country.

When you choose hotels, choose those in a good looking area. In general, food here is good, but always drink purified water (boiled or purified with purification pills). Also, before starting your trip you should learn something about tropical diseases and their prevention. Remember the local economy is based on dollars, so you can exchange bills easily but travellers checks cannot always be exchanged.

The last warning I would mention is this: watch your belongings. I have had things stolen in this country! Even tough guys get robbed.

If you wish to obtain more information, please, do not hesitate to write to me, and I will try my best to help you. Anyway, I hope to continue....

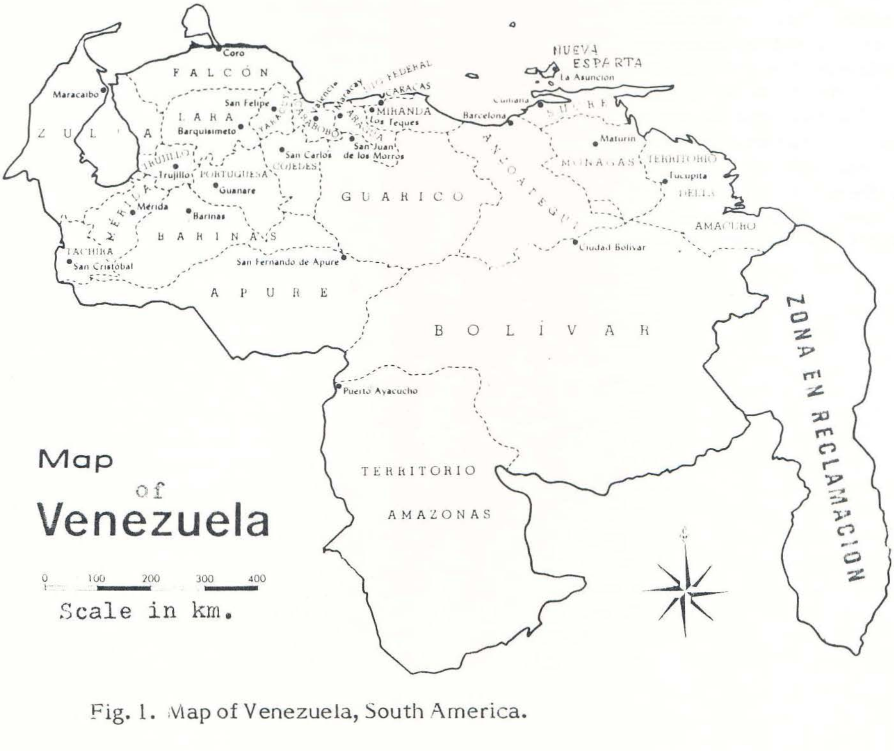

Fig. 1. Map of Venezuela, South America.

An Effective Method Of Relaxing Insects Collected in Formol

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Pitfall trapping has become one of the most effective methods for sampling soil for terrestrial arthropods. There are many kinds of preservation media that have been used in pitfall traps. In spite of some disadvantages a solution of water and formol is the most frequently used medium due to its excellent preservative properties and low price. Besides, the formol kills those insects which fall into the trap and this increases sampling efficiency by reducing the number of escapes (as can happen when using other media such as ethlene glycol or poor water). Thanks to the afore mentioned properties, formol can be expected to perform as a good pitfall trap preservative for many years to come.

Unfortunately, the use of formol has one serious disadvantage for collection oriented entomologists. Specimens are very difficult, if not impossible, to mount in a satisfactory scientific or aesthetic manner.

After experiments with many compounds, I have found that formol-preserved specimens can be relaxed by boiling the insects in a 20% solution of citric acid. The boiling time depends on the size of the specimen and its' hardness. My experience has been that large beetles (20 - 30 mm) should be boiled approximately 2 hours, medium sized beetles (10 - 20 mm) for 1-2 hours, and smaller specimens for about an hour. The above times are, of course, guidelines and the exact boiling time is best determined by checking each individual during the boiling process. During a long boiling, the water will have to be replenished, or better yet the maceration solution should be changed. It is recommended that you warm the container with the specimens in a larger water bath to protect it from direct heat.

I have obtained good results with the above mentioned method, even with beetles preserved in 8-10% formol.

Monarch Magic

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For many years the winter resting place of the Monarch butterfly, Danaus plexippus, was a mystery. However, after 40 years of searching, Dr. Fred Urquhart found the site in Sierra Madre, west of Mexico City. There, in semi-dormancy, the butterflies cling to trees in enormous numbers, waiting for the warmer days of spring. During their migration the Monarchs may travel distances of 1500 miles or more south in late summer and up to 1000 miles north the following spring, enduring all types of hazardous weather conditions. They are strong flyers adapted with wings that are tough, rubbery and have flexible membranes. This stately butterfly weighs only 1/2 gram but it is a bundle of energy during its (adult) life span of about 6 months.

On June 11, 1983 I collected 5 eggs from a nearly field and placed them in a glass tank under fluorescent lighting. I wanted to observe their entire life cycle. The next day the eggs hatched; this was the beginning of a daily chore, cleaning the tank of debris and supplying fresh food. he caring and feeding of butterflies, or any other creature, takes a bit of dedication, but it's well worth it to witness some of nature's wonders. This butterfly 'magic', the stages from egg to caterpillar to pupa, then to adult, is known as complete metamorphosis.

The egg is deposited singly beneath a milkweed leaf. After four days (longer if the days have been cool), a tiny one-eighth inch caterpillar will pop its head out to view the world. Instinctively it eats the empty eggshell, the first nourishment outdoors. Then for about 12 days it will munch on milkweeds (family Asclepiadaceae). Every few days it will shed its skin to make room for growth. The caterpillar will go through four of these instars before it is ready to pupate.

As my caterpillars grew their body patterns became very distinct, having bright yellow, black and white (transverse) stripes and two black threadlike appendages at either end of its body. Monarch caterpillars are well protected from predators. It is true that you are what you eat, at least if you're a Monarch! The food ingested by Monarchs contains a toxic substance called cardenolides which are very distasteful to birds. Birds soon learn to recognize the bright warning coloration of the Monarch caterpillar and adult.

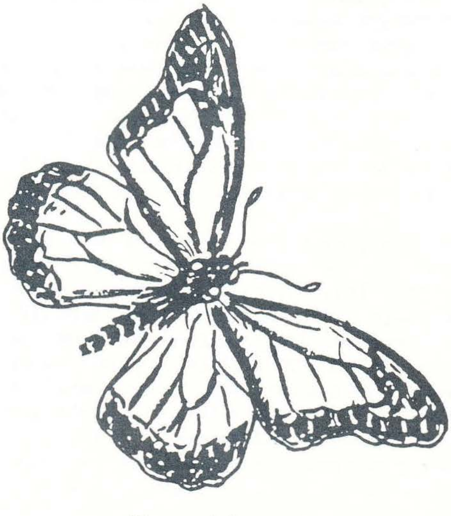
After 11 days the caterpillars stopped eating and started to wander about in the tank. This was the signal that they were ready for the next stage in their life cycle. They were looking for a place to settle and rest in the chrysalis stage. By June 24 each caterpillar made their choice. I had placed branched twigs across the tank for this purpose. One decided to make its chrysalis on a piece of paper toweling against the glass. This did not seem like a good place to hang when it came time to emerge; therefore, using a manicure scissor I carefully cut the paper towel with the chrysalis attached and taped it to a twig. Unfortunately the point of the scissor punctured the skin of the chrysalis. There was a slight 'bleeding' but gradually it sealed itself. The skin is very thin and if broken it is known that the caterpillar inside will die. I had to wait and see.

The chrysalis of the Monarch is one of the most beautiful in the butterfly world. Envision a small piece of carved jade the shape of an olive with tiny green dots across one side, hanging from a twig by a black button of silk. On June 26 two of the chrysalis started to turn brown and translucent. During the early morning of June 27 they emerged. Within two and three days apart the others also were "born". I had four males and one male. In the birthrate of butterflies, the males outnumber the females 1000 to 1. The males are easily identified by the black dot on each of the lower wings. The dots are pheromone glands used to attract females during the mating season. The Monarch in the injured chrysalis emerged with only a slight blurring of color and a dent in the upper right wing. It was a male.

I kept them only a few days to see if I could feed them. Using a small jar lid I dampened paper toweling with a sugar-water solution. Since butterflies 'taste' with their feet, I felt I had to first give them a taste. Then I gently uncoiled the proboscis with a toothpick to encourage them to drink. It succeeded. I then had to wash their feet to remove the 'taste' and sticky sugar. I also placed them on zinnias in the early morning to drink their fill. After photos were taken of all stages, all were released except for the injured one which I kept as a specimen. Off they flew towards the west, hesitant at first, but not for long. It was July 4th, and Independence Day for all of us.

Today, September 2, 1985, as I write the last few sentences of this story, I'm watching a Monarch resting on a maple leaf. It's the beginning of a new migration.

We know Monarchs may travel ten to thirty miles an hour, and an average of eighty miles a day. We still don't know what guides the Monarchs south. However, we can be sure these adults will instinctively return 'home' next Spring, beginning another cycle of life.



Monarch butterfly

Video: A New Tool For The Entomologist

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Toledo, OH 43612 USA

Lately, we hear about the destruction of natural habitats (with thousands of acres of tropical forest disappearing daily) and the extinction of species (with estimates that many may disappear in our lifetime). Although most of the species that entomologists study will probably be around for a long time to come, there are many insect species that have declined in the 'wild'. You may know of some in your area that are not as common as they used to be. One problem is that many of the vacant lots and fields you have collected at are now covered with concrete or built upon. You probably have to travel farther to find unspoiled collecting areas.

There are many of us who are interested in visiting other parts of the world to see exotic insects and other wildlife before they disappear, but we lack the means or opportunity to travel. Perhaps opportunities will arise in the future, but maybe by then it will be too late.

Modern technology has opened up new possibilities that could be of special interest to Y.E.S. members and other entomologists. Computers and radio telemetry have been useful in many aspects of wildlife behavioral studies for many years. Now we have the ability to record images on magnetic tape. In most cases video equipment (cameras, recorders, and players) are becoming reasonably affordable, and this opens up the opportunity for many amateur entomologists to get into nature and insect filming.

Many of us have seen the professional nature and wildlife films on television. They only rarely feature insects, and even when they do it is quite unlikely they will show anything other than the common, showy or unusual insects. The identification, behavior, biology, and ecology of species that interest many of us generally do not get filmed for commercial television.

Wouldn't it be nice if various Y.E.S. members began to build a 'library' of entomological videos! Some of this is already being done, but mostly on economically significant injurious insects. (Editor. If a group of Y.E.S. members were to become active in preparing videos of not-so-coomon insects, perhaps there would be an opportunity for sharing of these resources. Maybe there could even be a video library maintained at Y.E.S. International Headquarters, designed to make loans to members.)

It appears the possibilities of video as an entomological tool are endless. The life cycle of a species could be filmed from egg to adult (a special macro lens might be required); the courtship and mating behavior of species could be recorded; collecting sites, habitats (especially those soon to disappear), and collecting trips could be documented; demonstrations of insect rearing, collecting techniques and equipment; recording field experiments and other studies; or, filming rare or endangered species as an alternative to collecting them.

Making entomological videos could be done for personal reasons (to preserve memories and accomplishments) or they could be made a a permanent scientific record (to be used by museums, universities and researchers). The potential value of entomological videos would warrant serious consideration of their donation (or at least copies) to a reputable library, museum, university or scientific society.

Recently I experimented with a rented camcorder (camera and recorder in one unit) to see how my garden and mantids would look on television. I experimented with the filming of aphids, bees and katydids; I was even able to record natural background sounds such as the cicadas and katydids. Sometimes I narrated to identify what was being filmed, or what was being heard. With the macro lens (designed for closeups of small objects) I filmed a mantid eating a bee. I used a flashlight after dark and was able to get some good pictures of the mantids and katydids.

My friend and I made a documentary of several collecting sites, along with some humorous commercials by his children. We showed the area and then zoomed in on the insects. Sometimes the insects didn't cooperate, but we had a good time anyway!

Finally, a few minor details have to be worked out before this idea can become a successful reality. I tape format has to be decided on (Beta, VHS, or 8mm). Perhaps language barriers will have to be overcome. And there are always postal regulations and hazards to worry about (for example, only copies -not masters- of tapes should be send in case they are lost or damaged.

If any Y.E.S. members are interested in this idea, I would like to hear from you. I am interested in knowing if anyone else is filming insects in different parts of the world, and perhaps an exchange can be arranged. Also, I am interested in audio tapes of insects and frogs.

FIELD NOTES

Nicrophorus didymus Brulle (Coleoptera: Silphidae) in Bolivia, Peru and Venezuela

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Nicrophorus didymus Brulle is a carrion beetle associated with dead vertebrate carcasses.

VENEZUELA

(1) 12-viii-1983 A dead opossum was placed in a woods, near the road from San Cristobal to Chorro del Indio, State of Tachira. Altitude: 1200m. Five specimens were collected.

(2) 18-vi-1986 A pitfall trap baited with fish was placed in the woods near Santa Rosa, Merida, State of Merida. Altitude 2000m. One specimen was collected.

PERU

(1) 20-i-1984 A dead opossum was found on the road near Machupicchu, Departmento de Cuzco. Attitude: 2300m. One specimen was collected.

BOLIVIA

(1) 9-i-1985 Two pitfall traps, one baited with a dead bird and one with a dead frog, were placed in the woods near Yacuiba, Gran Chaco. Altitude: 500-1000m. Seven specimens were collected.

Hymenoptera of Portland, Oregon, U.S.A.

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The following is a partial list of the Hymenoptera occurring in the city of Portland, Multnomah County, Oregon, U.S.A., and its immediate surrounding suburbs, and collected by the author over a period of several years. The vast majority of the determinations were made by Dr. George Ferguson at Oregon State University, to whom this author is indebted for his patience keying out of the specimens, and his inspiration. Thanks, also, to Dr. John Lattin for allowing me to use of the Oregon State University collection, housed in the entomology museum, and Dr. W.P. Stephen, who helped with the bees, and pointed out the appropriate literature.

Much remains to be done in determining what species occur in the city, especially in regards to micro-Hymenoptera, and what critical habitats must be preserved to maintain insect diversity. Some mysteries need solving, too. The absence of velvet ants (Mutillidae), is puzzling, since many wasp species that host mutiullids are found here.

Lists for other orders occurring in Portland will be forthcoming, along with additions to this one. Additional data may be obtained from the author. All inquiries are welcome!

(Editor's Note: Other Y.E.S. members are encouraged to assemble lists of the insect faunas of their hometown for publication in Y.E.S. QUARTERLY!)

HYMENOPTERA OF PORTLAND, OREGON, USA

- Family Cimbicidae (cimbicid sawflies)
  - Trichiosoma triangulum Kirby
  - Zaraea inflata Norton
- Family Tenthridinidae (sawflies)
- Family Siricidae (horntail wood wasps)
  - Urocerus albicornis californicus Norton, California horntail
  - Urocerus sp.
- Family Braconidae (braconid wasps)
  - Chelonus sp.
- Family Ichneumonidae (ichneumon wasps)
- Family Leucospididae (leucospids)
  - Leucospis affinis affinis Say
- Family Perilampidae (perilampids)
  - Perilampus sp.
- Family Cynipidae (gall wasps)
  - Andricus quercus-californicus var. spongiolus Gillete, the bullet gall or oak apple gall
  - Besbicus mirabilis (Kinsey), the speckled gall
  - Diastrophus kincaidii Gillette, the thimbleberry gall
  - Diplolepis rosae L., the mossy rose gall or Bedeguar gall

- Family Chrysididae (cuckoo wasps)
  - Omalus auratus (L.)
  - Holopyga ventralis (Say)
  - Hedychridium dimidiatum (Say)
  - Chrysis amala Rohwer
  - C. coerulans Fabricius
  - Ceratochrysis perpulchra (Cresson)
- Family Formicidae (ants)
  - Camponotus sp.
  - Formica fusca L., the silky ant
- Family Eumenidae (potter and mason wasps)
  - Ancistocerus spp.
  - A. tuberculocephalus sutterianus (Saussure)
  - Stenodynerus sp
  - Eumenes crucifera Provancher
- Family Vespidae (yellowjackets, paper wasps)
  - Polistes fuscatus aurifer Saussure, the golden paper wasp
  - Mischocyyarus flavitarsis flavitarsis (Saussure)
  - Vespula atropilosa (Sladen), the prairie yellowjacket
  - V. consobrina (Saussure), the blackjacket
  - V. pennsylvanica (Saussure), the western yellowjacket
  - V. vulgaris (L.), the common yellowjacket
  - Dolichovespula arenaria (Fabr.), the aerial yellowjacket
  - D. maculata (L.), the bald-face hornet
- Family Pompilidae (spider wasps)
  - Chirodamus pyrrhomelas (Walker)
  - Priocnemis oregona Banks
  - P. notha occidentalis Banks
  - Episyron quinquenotatus hurdi Evans
  - Auplopus architectus metallicus (Banks)
  - Pompilus arctus Cresson
- Family Sphecidae (thread-waisted wasps)
  - Chalybion californicum (Saussure), the blue mud dauber
  - Sceliphron caementarium (Drury), the black & yellow mud dauber
  - Isodontia elegans (Smith)
  - Prionyx canadensis (Provancher)
  - Ammophila kennedyi (Murray)
- Family Pemphredonidae (aphid wasps)
  - Mimesa sp
  - Mimumesa sp
  - Psenulus sp.
  - Diodontus sp.
  - Pemphredon sp.
- Family Astatidae (stink bug-hunting wasps)
  - Astata nubecula Cresson
  - A. unicolor Say
- Family Larridae (sand-loving wasps)
  - Tachytes chrysopyga obscurus Cresson
  - Tachytes sp.
  - Tachysphex sp.
  - Trypoxylon sp.
  - Trypargilum sp.

- Family Crabronidae (crabronid wasps)
    - Didineis nodosa Fox
    - Gorytes sp
    - Bembix americana comata Parker
- Family Philanthidae (bee wolves, weevil wasps)
    - Philanthus crabroniformis Smith
    - P. gibbosus (Fabr.)
    - P. pacificus pacificus Cresson
    - Cerceris nigrescens Smith
- Familt Colletdae (plasterer bees)
    - Hylaeus sp.
- Family Halictidae (burrowing bees)
    - Agapostemon texanus Cresson
    - A. virescens (Fabr.)
    - Halictus rubicundus (Christ)*
    - H. ligatus Say*
    - H. confusus Smith*
    - Sphecodes sp.
- Family Andrenidae (mining bees)
    - Andrenna sp.
- Family Megachilidae (leaf-cutter bees)
    - Osmia lignaria lignaria Say
    - Osmia sp
    - Megachile sp.
    - Colelioxys sp
- Family Anthophoridae (digger bees, carpenter bees)
    - Epeolus sp
    - Triepeolus sp.
    - Nomada sp
    - Melissodes sp.
    - Anthophora sp.
    - Ceratina sp.
- Family Apidae (honeybees and bumblebees)
    - Apis mellifera L., the honeybee
    - Bombus vosnesenskii Radoszkowski
    - B. melanopygus Nylander
    - B. californicis Smith
    - B. terricola occidentalis Greene
    - B. sitkensis Nylander*
    - B. mixtus Cresson*
    - B. caliginosus (Frison)*
    - B. griseocollis (DeGeer)*
    - B. flavifrons dimidiatus Ashmead*

(* - denotes literature record)

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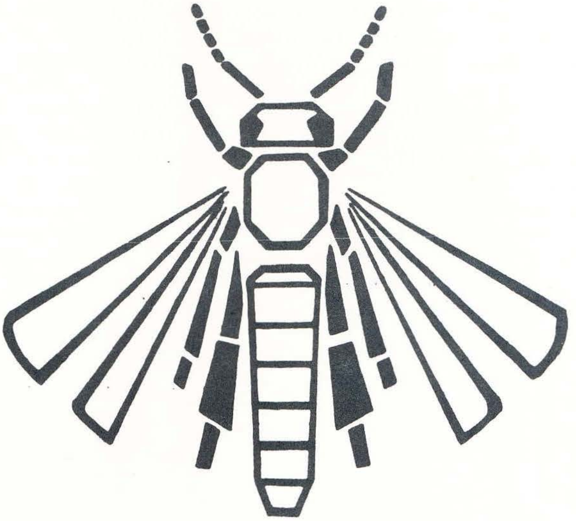

A honey bee queen (Apis mellifera L.), drawn by Daniela Havranek, U.N.E.T., San Cristobal, VENEZUELA.

Additional Distribution Records for Harpalus katiae Battoni and Harpalus caliginosus Fabricius (Coleoptera: Carabidae)

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Recently, I reported on the distribution of these two species of large carabid beetles (Dunn 1986). Since that time I have seen additional specimens collected in the southwestern United States. These records provide significant information for areas where I was uncertain of the occurrence of these species.

I obtained 3 specimens of H. katiae from Don Ahart of Tucson, AZ. All three specimens were collected in ARIZONA, Gila Co., Payson (2 on 21-viii-1986, and 1 on 4-viii-1973).

In material borrowed from the Colegio de Graduados in Cd. Juarez, Mexico, I found the following specimens of H. caliginosus: MEXICO: Chihuahua, Mpio. Madera, 2km south Zaragosa, 12-vi-1981 (4); Chih., Mpio. Camango, 6-viii-1981 (1); Chih., Mpio. Juarez, 40km south Juarez, 1-vi-1981 (2); and Chih., Mpio Janos, 18km south Ojo Frio, 15-v-1982 (1).

References

Dunn, G.A. 1986 Additional Distribution Records For The Recently-described Species Harpalus katiae Battoni (Coleoptera: Carabidae). Young Entomol. Soc. Quarterly 3(3):2-3

BOOK REVIEWS

Economic Impact and Control of Social Insects. Edited by S. Bradleigh Vinson. Praeger Publishers, New York, NY, 1986, 6 x 9.5" hardcover, 421 pp, US $49.95. (ISSN 0-03-063208-0; SB931.E26)

Written as a review-style publication, with contributions by 17 authors, this book presents a comprehensive (but not exhaustive) overview of some economically significant _social_ insects. The purpose of the book is "to bring together information concerning the problems that social insects cause man, his structures, and treasured artifacts. In addition to information concerning the problems caused by social insects, current control technologies are discussed. In order to provide some background, several chapters on the biology, physiology, and ecology of several select social insects are included."

The book is organized into 14 chapters (and an index). Specifically, the topics covered are: "The Biology, Physiology, and Ecology of Termites" by T.G. Wood and R.A. Johnson, "Economically Important Termites and Their Management in the Oriental Region" by P.K. Sen-Sarma, "Termites and Their Economic Importance in Australia" by J.R.J. French, "Economic Importance and Control of Termites in the United States" by J.K. Mauldin, "Beneficial Aspects of Termites" by E.A. McMahan, "The Economic Importance and Control of Leaf-Cutting Ants" by J.M. Cherrett, "The Biology, Physiology, and Ecology of Imported Fire Ants" by S.B. Vinson and L. Greenberg, "The Biology, Economic Importance, and Control of the Pharaoh's Ant, _Monomorium pharaonis_ (L.)" by J.P. Edwards, "Biology, Economics, and Control of Carpenter Ants" by H.G. Fowler, "The Beneficial Economic Role of Ants" by W.H. Gotwald, Jr., "Utilizing Economically Beneficial Ants" by J.D. Majer, "_Polistes_ Wasps: Biology and Impact on Man" by J.E. Gillaspy, and "Biology, Economic Importance, and Control of Yellowjackets" by R.D. Akre and J.F. MacDonald.

Because of each chapter's contribution the entire book does a good job of presenting information on economically important social insects (termites, ants, and wasps). The book is nicely balanced with presentations on both negative and positive aspects of social insect importance (even without mentioning the honey bee!). For example, we are reminded that only about 10% of the 2000 species of termites in the world are economically important because of damage to structures, stored products and crops. Since one theme of this book is economic impact, many of the chapters contain some interesting figures on loss estimates, information which, as most of the authors point out, is underestimated, only partially available, or totally inadequate for these insect pests.

Overall, the information presented is sufficiently comprehensive despite the fact that exhaustive, in-depth discussions are avoided. Although this may sound like a deficiency, I don't think it diminishes the book's value significantly - for two reasons. The avoidance of detailed, in-depth discussions makes the book more comprehensible for those of us (professional and amateur alike) that are not all that familiar with the social insects. Furthermore, even if the reader desires large amounts of in-depth information, the references list for each chapter is more than adequate for obtaining additional information.

Many of the chapters present information on current control technology, including pesticides. While this is useful information, the reader must keep in mind that pesticide recommendations change frequently, and that many pesticides are subject to local regulation. Sometimes the mentioning of specific pesticides, as part of a book on economically important insects, causes problems because the information is so unstable. At a minimum such information is of historical value and helps to illustrate the trends in chemical control of insects. It would have been nice if other authors used the format chosen by J.M. Cherrett and presented chemical control information in tabular form (Chapter 6, p.177, Table 6.3). This format served to remove the information from the text (thereby making revisions/additions easier in the future), and provided additional information on the source and age of the recommendation.

For those of us that are concerned with the durability and aesthetic appearance of books I have found that the black ink used on the cover to highlight the lettering is sloughing off (as a result of only three trips in my briefcase).

This book can be ordered from Praeger Publishers through any of their international offices: Holt Saunders, Pty., Ltd., 9 Waltham St., Artarmon, N.S.W. 2064, Sydney, AUSTRALIA; Holt, Rinehart & Winston of Canada, 55 Horner Ave., Toronto, Ontario, M8Z 4X6, CANADA; Holt Saunders. Ltd., 1 St. Anne's Rd., Eastbourne, East Sussex, BN21 3UN, ENGLAND; Holt Saunders, Ltd., Ichibancho Central Building, 22-1 Ichibancho, 3rd floor, Chiyodaku, Tokyo, JAPAN; or, CBS International Publishing, 383 Madison Ave., New York, NY 10175 USA.

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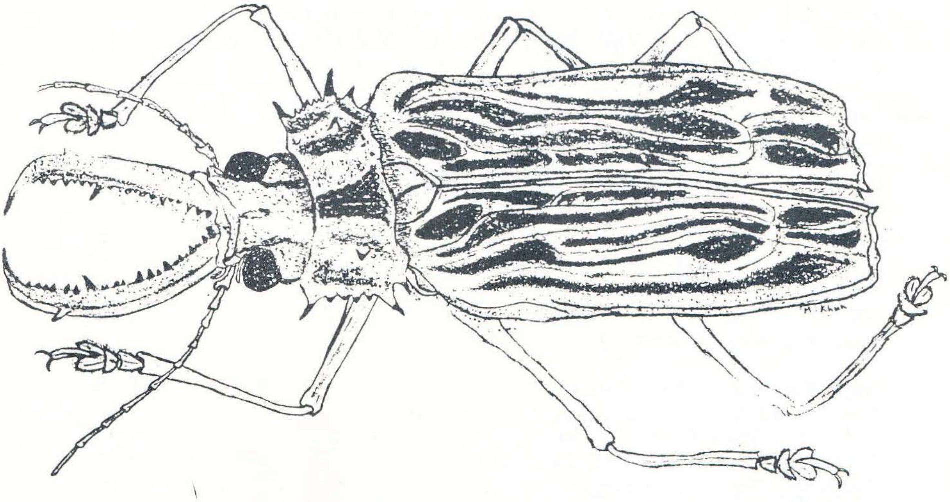
INSECT ILLUSTRATIONS



Longhorned beetle: Macrodontia cervicornis; length up to 150 mm. Illustration by Mark Khun, Reno, Nevada, USA.

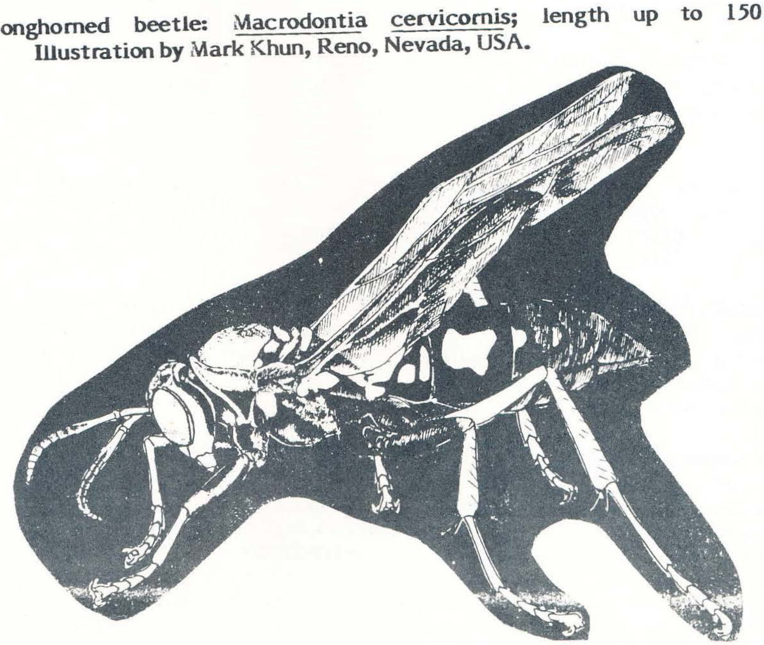


Illustration by Yoni Duran, U.N.E.T., San Cristobal, VENEZUELA

TRADINGPOST

Wanted: Wings from a wide variety of flying insects for use in macro photography work (see YES QUARTERLY 3(2): 40-41). I can use whole insects, even with damaged bodies, antennae, etc., or just wings. I am a naturalist and not an entomologist, so any help would be greatly appreciated! Contact Helmuth Schulz, Jr. 1582 US 131, Petsokey, MI 49770 USA. (3/4)

Wanted: Persons interested in exchanging specimens of Carabus, Calosoma, and Ceroglossus, worldwide, but especially North America. I can offer many European and Turkish species. Write to Carl L. Blumenthal, Kiefernstr. 21, D-5210 Troisdorf, WEST GERMANY. (3/4)

For Sale: Dried specimens of Philippine insects; also other natural history specimens such as bird skins, mammal skins, prepared microscope slides, preserved marine invertebrates, etc. Please contact Julio M. Mirafuente, General Manager, Star Biological Supplies, Boac, Marinduque, PHILIPPINES. (3/4)

Exchange Wanted: I have many insects (especially Coleoptera) available from Trinidad, Venzuela, Europe and southwestern U.S., for Carabidae and Cicindelidae of the world. Especially interested in obtaining Australian, Asian and African species. All letters answered. John Hutchings, Dept. of Biology, California State University, Long Beach, CA 90840 USA. (3/4)

For Sale: Insects (especially butterflies, moths, beetles, hoppers, and stick insects) of Malaysia. Catalog - US $2.00. Contact Kee Choe Gooi, 70 Jalan Foo Win Yin, Canning Garden, 31400 Ipoh, MALAYSIA. (3/4)

For Sale: Approx. 500 species of Coleoptera: Cerambycidae, Carabidae, Buprestidae, Tenebrionidae, and Cetonidae. Free list. Prefer to exchange. Contact Dr. Diethard Dauber, Neubauzeile 78, A-4020 Linz, AUSTRIA. (3/4)

Free Publication Available: "Insect Rearing" by Pritam Singh, DSIR Alpha Publication #53 (March 1986). Any one interested in insect rearing will want a copy of this 4pp bulletin. Send requests to: Publication Officer, Science Information Publishing Centre, DSIR, P.O. Box 9741, Wellington, NEW ZEALAND. (3/4)

More Publications Available: "A Catalog of the Coleoptera of America North of Mexico, Family...........": Anobiidae, Amphizoidae, Cerylonidae, Ciidae, Dryopidae, Cupedidae, Curculionidae (Curculioninae), Elmidae, Heteroceridae, Languridae, Limnichidae, Micromalthidae, Micropeplidae, Platypodidae, Psephenidae, Pyrochroidae, Rhysodidae, and Scarabaeidae (Geotrupinae). Published by the USDA Systematic Entomology Lab and distributed by the Coleopterists Society. Send requests to Gary A. Dunn, Dept. of Entomology, Michigan State University, East Lansing, MI 48824-1115 USA. (3/4)

For Sale: Quality greeting cards for entomologists - design on cover of Spring 1986 Y.E.S. QUARTERLY - other designs to be available soon. Contact Todd Lawton, 29-61 Furby, Winnipeg, Manitoba, R3C 2A2 CANADA. (3/4)

For Sale or Exchange: North American Cicindelidae. Will also trade other Coleoptera for Cicindelidae. Contact Todd Lawton, 29-61 Furby, Winnipeg, Manitoba, R3C 2A2 CANADA. (3/4)

For Sale or Exchange: Large supply of live pupae of Catalpa hornworm (Ceratomia catalpae) and black swallowtail (Papilio polyxenes). Prefer to exchange. Call or write: David C. Patten, General Delivery, Peace Valley, MO 65788 USA,(417) 277-5836. (3/4)

Wanted: Live ovae of the Io, Luna, cecropia, Cynthia and promethea moths. Prefer to exchange, if possible (see previous ad). Contact: David C. Patten, General Delivery, Peace Valley, MO 65788 USA, (417) 277-5836. (3/4)

Wanted: Letterheads that use insects as a part of the design. I am trying to put together an interesting cover for a future issue of Y.E.S. QUARTERLY. Anything would help (but don't send the Y.E.S. logo)! David C. Patten, General Delivery, Peace Valley, MO 65788 USA (3/4)

Wanted: Correspondents interested in scorpions, large spiders, and mantids for use as specimens or pets. Also, those interested in collecting Coleoptera, especially Tenebrionidae, Scarabaeidae, Cerambycidae, and Carabidae, and rearing and medical entomology. Contact Keith Dabney, 702 Haight Ave., San Francisco, CA 74117 USA. (3/4)

Exchange: Cicada skins from New York (USA). Beginning cvollector will trade for any interesting specimens. All letters answered. Joseph Glendinning (age 8), 2654 Linden, East Lansing, MI 48823 USA (3/4)

For Sale: Excellent quality insect mounting pins including std. black, elephant, stainless steel. Best prices available. Also offering the most popular books and supplies. Worldwide butterflies, moths and beetles in all price ranges. Personalized service to the novice and seasoned collector. Featuring "The Illustrated Encyclopedia of the Butterfly World in Color". Specializing in Papilio, Morpho and Heliconius. Send US $5.00 for subscription to price lists to Ianni Butterfly Enterprises, P.O. Box 81171, Cleveland, OH 44181 USA. (3/4)

For Sale: Beautiful woven cloth banner - yellow and 6 x 9 inches. Features the logo of the Universidad Nacional Experimental del Tachira (Venezuela), a large cerambycid beetle Stenodontes molarius Bates (in black) with green U.N.E.T. letters. Only US $2.00. Send orders to Daniela Havranek, U.N.E.T., Apartado 436, San Cristobal, Tachira, VENEZUELA, S.A. (3/4)

Wanted: I would like to obtain a copy of O'Brien, C.W. and G.J. Wibmer, 1986 "Annotated checklist of the weevils (Curculionidae sensu lato) of South America" (Mem. Amer. Ent. Inst., 39) in exchange for a copy of Louw, S. 1986 "Revision of thje Microcerinae (Coleoptera: Curculionidae) with an analysis of their phylogeny and zoogeography (Mem. nas. Mus., Bloemfontein 22: 1-331). Contact A. Rensburg, P.O. Box 266, Bloemfontein 9300, SOUTH AFRICA. (3/4)

Correspondence Wanted: I am interested in making contact with members with an interest in tarantulas, with a view to exchanging and buying live specimens and exchanging information. Ronald N. Baxter, 45 Chudleigh Crescent, Ilford, Essex, IG3 9AT, ENGLAND. (3/3)

Wanted: Looking for a used (or mint) copy of Hatch (1953), The Beetles of the Pacific Northwest; Darlington (1952), The Carabid Beetles of New Guinea, Part 1 AND Part 2 (Agoniini). Send condition and price to Yves Bousquet, BioSystematics Research Institute, Agriculture Canada, Ottawa, Ontario, K1A 0C6 CANADA. (3/3)

Wanted: Pupae and/or cocoons for a live mini-insect zoo exhibit at the Hicksville-Gregory Museum (NY). Donations gladly accepted, will purchase if necessary. J. Scancarelli, Director, Hicksville-Gregory Museum, Heitz Place, Hicksville, NY 11801 USA. (3/3)

Wanted: North American and worldwide robber flies (Diptera: Asilidae). Can send many Italian species of beetles and other orders of insects in exchange. All correspondence welcomed! Cesare Iacovone, Via G. Noventa No. 12, Scala I - int. 3, 00143 Roma, ITALY. (3/3)

Wanted: Less common North American Saturniidae (specimens or live ovae) with data. Any Sphingidae, also. Send offers to Eric Olson, 5117 Flad Ave., Madison, WI 53711 USA. All letters answered. (3/3)

Collecting Safari: The tropical rain forests of the world are being destroyed at a rate of twenty million hectares per year (an area about the size of Alaska). Experience the splendor and beauty of these jungles while they are still with us. We offer some of the finest organized safaris available. Your vacation and collecting trip in one package! For brochures and information contact Darien Compound Safaris, Special Tours and Travel, P.O. Box 909, Panama 9A, PANAMA Tel. 55-7272 (3/3)

Will Trade: A Field Guide to the MOTHS of Eastern North America by Charles V. Covell, Jr. (hardbound and like new - used three times). Will trade for publications on CVoleoptera or a reasonable number of cerambycid (long-horned) beetles. All letters answered. Bobby Montgomery, RR - 1, Savannah, MO 64485 USA. (3/3)

For Sale or Trade: Megarhyssa aterata (Hymenoptera) and its host Tremex columba (Hymenoptera) (adults and immatures of both). In all there are 41 8-dram vials with approx. 55 specimens preserved in 190 proof alcohol. The specimens were collected in Missouri, and I will include 4+ pages of field notes in additiona to the usual collection data. Will sell for US $50.00 or trade for publications on Coleoptera or for specimens of Cerambycidae. All letters answered. Bobby Montgomery, RR - 1, Savannah, MO 64485 USA. (3/3)

For Sale or Exchange: Giant flower-loving flies (genus Rhaphiomidas), various species, size 20 - 30+ mm. Also, Mydas fly (Neomydas pantherinus). Many other large, rare Diptera from western USA, some with empty (but perfect) pupal case. S.A.S.E. for prices. Will exchange for other large Diptera (20 mm & up) worldwide. Contact: Rick Rogers, 2630 Palm Drive, Hermosa Beach, CA 90254 USA. (3/2)

For Sale: Worldwide distributor of superior quality entomological supplies books and living material. Send US $1.00 for catalog. We specialize in prompt, courteous service. American Biological Supply Co., 1330 Dillon Heights Ave., Baltimore, MD 21228 USA. Phone (301) 747-4500 (3/2)

Wanted: Coccinellidae, worldwide. Will purchase or exchange. Send offer to: Francesco Isgro, 2002 Wellfleet Court, Falls Church, VA 22043 USA (3/2)

For Sale or Exchange: Black-winged damselflies, Calyopteryx maculata (males and females) with complete data. Interested in offers from anywhere in world. Contact: David C. Patten, General Delivery, Peace Valley, MO 65788 USA All letters answered. (3/2)

For Sale: Many kinds of insects, for scientific studies or just for collections; named or unnamed, lots or single specimens, pinned and labelled or papered. Collections are named, pinned and labelled. WANTED: Tenebrionidae from arid areas of South America (only) such as: Patagonia, high Andes ranges, etc. EXPEDITIONS: to any area of South America to collect, study or photograph insects. Vacancies for two people and gear in a camper. 40 years experience. Send inquiries to: Luis E. Pena G. P.O. Box 2974, Santiago, CHILE. (3/2)

For Sale: Formosan butterflies, moths, beetles and other dried insects. Also, live coccoons and ovae of moths. Write to: P.T. Chang, P.O. Box 873, Taipei, Taiwan, REPUBLIC OF CHINA. (3/2)

For Sale: Worldwide Lepidoptera, also some Coleoptera. Top quality papered specimens, with complete data. Good prices. Satisfaction guaranteed. Also for sale: Elephant-brand insect pins, and the books "The Illustrated Encyclopedia of the Butterfly World" by Smart and "Butterflies of the World" by Lewis. Send US $1 and legal size SASE for pricelist. Your $1 refunded with first order. Thomas Greager, R.D. #6, Box 56-B, Greensburg, PA 15601 USA. (3/2)

Wanted: Copies of the books: "Mosquitoes - Their Bionomics and Relation to Disease" by W. Horsfall (1955); "Myiasis in Man and Animals of the Old World" by F. Zumpt (1965); and "The Mosquitoes of Canada" by D.M. Wood et al. (1979). Will pay a reasonable price and shipping costs. Donald Baumgartner, 150 S. Walnut St., Palatine, IL 60067 USA (3/2)

Wanted: Markets for informative articles on insects and spiders, illustrations, and editorilas on wildlife and environmental issues. Cartoons, too. Eric R. Eaton, 2310 S.W. Bertha Blvd. Apt. 5, Portland, OR 97201 USA. (3/2)

For Sale: A1 papered Central and South American Prepona. A wide selection. Also sell African Charaxes and various Nevadan butterflies and large and medium Dynastinae. For a free list, write to: Mark Khun, 1245 Conway Lane, Reno, NV 89503 USA (3/2)

Publications for Exchange: I have a large number of duplicate reprints and photocopies of articles on Coleoptera (mostly Carabidae and Cicindelidae) which I would rather not throw away - they need a good home! I would be willing to accept any reasonable offer of specimens (Carabidae or Cicindelidae) or other literature. A free list is available upon request. Gary A. Dunn, Department of Entomology, Michigan State University, East Lansing, MI 48824-1115 USA. (3/2)

For Sale or Exchange: All orders of insects from Israel, especially Diptera and Hemiptera. Write for details. Izhak Nussbaum, Nahalat zvi 35, Petack-Tikva 49421, ISRAEL. (2/4)

For Sale: Many butterflies, beetles and other insects from all parts of the world. Write for main list and supplementary list every month. FOR EXCHANGE--same for many rarest insects and others. Send your offer. WANTED--all information regarding breeding of Goliathinae, Dynastinae and other Scarabaeidae. Also, we research living material like Dynastes hercules, neptunus, megasoma, Goliathus, etc. Gerald Pelissie, "Les Granges Noires", 01660 Chaveyrait, FRANCE. (2/4)

For Sale: Worldwide collectible butterflies, beetles and rare insects, names with data. For subscription to butterfly and beetle price lists send $5.00 to Ianni Butterfly Enterprises. P.O. Box 81171, Cleveland, OH 44181 U.S.A. (2/4)

For Sale: Neotropical insects from northen Central America, or will **Exchange** same for Catocala (Lepidoptera: Noctuidae) especially from Europe, N. Africa, USSR, Central Asia, China or Korea. Also, SELL glassine envelopes in three convenient sizes; take fountain pen and stamp pad ink well. Eduardo C. Welling M., Apartado Postal 701, Merida, Yucatan, MEXICO (2/4)

For Exchange: Will exchange many species of butterflies from Mayalasia, Phillipines, Taiwan, some from Africa, Peru, Brasil, and Europe, all in A1 quality, for A1 specimens from other countries (USA, Canada, Central America, South America, Australia, Indonesia, India, etc.). Exchange preferred, but can also buy. Please write to Patrick M. Malesieux, 87, rue Delhaye 59 148 Flines les Raches, FRANCE, (2/4)

For Sale: Large selection of papered Malaysia Butterflies, beetles, and other insects, all of A1 quality with date. Free catalog available from: Deco Enterprise, P.O. Box 155, TAIPING, Malaysia (2/4)

Exchange Wanted: Will exchange Cicindelidae and other insects from New York state and New England for any part of the U.S. or world. All letters will be answered. Michael A. Valenti, 135 Jamesville Ave., Syracuse, NY 13210 U.S.A. (3/1)

For Sale: Philippine insects--dried and papered specimens. Please contact Elizabeth Lumawig, P.O. Box 2684, Manila, PHILLIPPINES. (3/1)

For Sale or Exchange: Butterflies and moths, also some odd insects, I collected in New Zealand last winter. Also, Lepidoptera from North America, Europe and Japan, including several much-sought western species and subspecies. John Reichel, P.O. Box 789, Revelstoke, British Columbia, VOE 2SO, CANADA (3/1)

For Sale: Sphingidae, Nymphalidae, Saturniidae, Helioconidae, ithomid sp., Caligos, and Morphidae. Also, Automeris, sp., Euchroma gigantea, Titanus gignateus, Harlequin, long horn beetles, Megasoma elephas, golden scarab and others. Darien Compound Safaris, P.O. Box 909, Panama 9A, REPUBLIC OF PANAMA. (3/1)

For Sale: The rarest Rhopalocera from Reunion Island (near Madagascar). Quality A1, papered, named. **For Exchange:** Insects from Reunion, all of A1 quality, named with data. **Wanted:** Morpho, Papilio, Agrias preforia, Saturniidae, Danaidae, Ornithoptera, Troides, Dynastinae, Lucanidae, Goliathidae, Buprestidae, Phasmidae--top quality, papered and with complete data. ALSO, willing to offer information, publications, and identifications on insects of the madagascerene area. T. Claude Anderes, 18 Residence Caravelle, Blve. de la Providence, 97400 St. Denis, Ile de la REUNION (FRANCE). (3/1)

For Sale or Trade: Living pupae and ovae of H. cecropia, A. luna, S. cynthia, A. polyphemus, C. angulifera, E. imperialis, P. modesta, and some other phinx species. Quantities limited, so first come first serve. Jeff Frey, 364 Oaklyn Road, Lebanon, PA 17042 USA (4/1)

Exchange Wanted: Beetles and moths of northeastern USA for similar insects from your area. Mainly interested in Lucanidae, Scarabaeidae, Cerambycidae, and Carabidae. Jeff Frey, 364 Oaklyn Road, Lebanon, PA 17042 USA (4/1)

Exchange: Coleoptera, especially Cerambycidae (worldwide). Please write to Gontran Drouin, 50 Principale, Ste Henedine, Quebec, G0S 2R0 CANADA (4/1)

Information Wanted: I am very interested in the pharmaceutical applications of scorpion venom, and would appreciate hearing from anyone with information, or an interest in this subject. Frederic LeCorre, B.P. 6, 34820 Teyran, FRANCE (4/1)

Wanted: Specimens of Chalcidoidea, particularly of Torymidae, from around the world. Will trade for various insects from Florida (USA). Would like to correspond with any young or amateur entomologists in Florida, especially for the purpose of studying certain gall insects. Contact Dave Johnson, University of Florida, 345 Entomology Bldg., Gainesville, FL 32611 USA. (4/1)

Wanted: Would like to trade North American beetles for other beetles from North America. I have beetles primarily from the midwest USA and would like to deal in pinned specimens only. If interested, please contact me and I will send a list of what I have available. B. L. Buchli, P.O. Box 187, Deerfield, WI 53531 USA (4/1)

Exchange: Stamps, worldwide. Daniela Havranek, U.N.E.T., Apartado 436, San Cristobal, Tachira, VENEZUELA (4/1)

For Sale: Video cassette (Beta) Pests of Cruciferae in Venezuela' (in Spanish). Pests and integrated control. 15min. Costs 500 Bs plus postage (300 Bs to USA, 400 Bs to Europe; $1 = approx 20Bs), immediate delivery guaranteed. Write checques to D.A. IZERA and mail them to Prof. Daniela Havranek, U.N.E.T., Apartado 436, San Cristobal, Tachira, VENEZUELA (4/1)

Wanted: Data on Plutella xylostella (L.), worldwide. Dr. Pedro Salinas, Apartado 552, Merida, VENEZUELA (4/1)

Exchange or Purchase: Formicidae (ants), worldwide. Dr. Pedro Salinas, Apartado 552, Merida, VENEZUELA (4/1)

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Information needed by Y.E.S. Headquarters: Members with information on INSECT ZOOS from around the world are asked to send details on the location(s) or institutional affiliation(s) mailing addresses, if known, would be most helpful¢ for use at the HQ resource center and inclusion in the next edition of the "Y.E.S. International Entomology Resource Guide". Send information to Gary A. Dunn, YES International Headquarters, Dept. of Entomology, Michigan State University, East Lansing, MI 48824-1115 USA (4/1)

Lost and Found: A manuscript, without an author's name on it, is being held at YES Headquarters. It is entitled "Lepidopteran Protection", and is printed on green and white computer paper. As soon as the author can be identified the paper will be published in Y.E.S. QUARTERLY. Sorry for the mixup! Contact the editor at Y.E.S. Int'l HQ, Dept. of Entomology, Michigan State University, East Lansing, MI 48824-1115 USA, phone (517) 353-3890

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Wanted: I am a new Y.E.S. member and I seek assistance in planning a trip to South America (especially Guyana and Brazil) for the purpose of collecting Lepidoptera. I desire information on the butterfly fauna and travel, etc. I have travelled and collected in Malaysia, Thailand, Taiwan and the Philippines, and I am willing to share my knowledge on these countries. Yoji Yamada, Yamagishi-so, 2-16-7 Hyakunin chyo, Shinjuku ku, Tokyo, JAPAN (4/1)

Wanted: Carabidae (ground beetles) of the genus Carabus from North America, China, Korea and Japan. Very interested in specimens of the subgenus Coptolabrus, Damaster, Megadontus, Acoptolabrus, and Apotomopterus. Can send Carabus, Cetoniinae and Cerambycidae from Italy, Yugoslavia and Mediterranean region. All correspondence welcome. Franco Sandel, Via Fontanelle 18, 31050 Miane (TV), ITALY (4/1)

Exchange Wanted: Interested in obtaining Carabini, Ceroglossini, Calosomini, Cychrini and Cicindelae (Carabidae) and Cerambycidae. Can supply determined specimens of Italian Carabidae, Cicindelae, Cerambycidae, Scarabaeidae, Cleridae, Silphidae, Tenebrionidae and Curculionidae (undetermined). Gianni Garavini, Via Mazzacavallo 7, 47100 Forli, ITALY (4/1)

Exchange or Purchase: Coleoptera (Lucanidae, Carabidae, Cetonidae, etc.), and Lepidoptera (Papilios, Nymphalidae, Saturnidae, etc.), worldwide; also, other insects, spiders (dead or alive). I can offer insects from Europe, Sri Lanka, Brazil, India and Malaysia. Erwin Rautenstrauch , Statlinger Str. 162, D-8900 Augsburg, WEST GERMANY (4/1)

For Sale: Cecropia and Luna cocoons, $.80 each; Polyphemus cocoons, $1.20 each. Minimum of five (5) cocoons (any kind) per order. Prices include postage. Jeff Miller, 550 Conifer Way, Ashland, OR 97520 USA (4/1 only)

Wanted: An exchange of butterfly specimens from eastern USA with collectors from southern amd western USA, and Canada. Specimen list available upon request. Write to Tom Allen, P.O. Box 132, Elkins, WV 26241 USA (4/1)

Wanted: Specimens of Nebria (Carabidae), especially from America and Asia. Exchange, correspondence, buying specimens or collection welcome. Philippe Roux, 34 rue Claude Decaen, 75012 Paris, FRANCE (4/1)

Exchange - Stamps for Beetles: I have a large number of stamps from the USA and elsewhere around the world, and I would like to trade them for specimens of ground beetles (Carabidae) or tiger beetles (Cicindelidae). All offers considered. Gary A. Dunn, Dept. of Entomology, Michigan State University, East Lansing, MI 48824-1115 USA (4/1)

Wanted: Live Scorpions and all information, personal notes, etc. about their breeding. Frederic LeCorre - B.P. 6 - 34820 Teyran - France (4/1)

Help Needed: Dutch college student of tropical agriculture seeks 6 month mandatory job placement experience in a tropical country. Will pay travel expenses but needs help with accomdations. Offers of support funds welcomed. C. V. avaiable. Contact Walter L. Ballizani, P.O. Box 358, 7400 AA Deventer, The Netherlands. (4/1x1)

Exchange or Sale: Can offer bred adults of a rare, striking aberration (broken-eye) of Automeris io io, representing several recessive genes with complete data in exchange for desirable papered butterflies with complete data from anywhere in the world, especially Papilionidae, Nymphalidae, Pieridae, and Danaidae. Send list of offers to SASE for wing samples. Will also sell if desired. Larry J. Kopp, R.D. 1, Box 30, Klingerstown, PA 17941 USA.

Our New Winter Catalog Just Published -specimens from South America, Africa, Indonesia, etc. Rare Morpho (including female) from Guyana, Peru, Brazil, Argentina, Mexico, Columbia, and Bolivia. Parnassius listing on request (including Mainland Parnassius, etc.). Low prices, prompt delivery. Send US $1 for catalog or $6 for a year of catalogs/newsletters. Transworld Butterfly Co. (YES), Apartado 6951, San Jose, COSTA RICA, C.A. (4/1)

Butterfly Collecting in Costa Rica: over 800 species of birds, 1500 species of butterflies, 9000 species of moths are found in Costa Rica. Fully inclusive program, includes transportation, meals, and accomodation. Maximum 6 persons per group. Write for a full 8-page brochure explaining about Costa Rica and our low cost program for collectors. Transworld Butterfly Co., (YES), Apartado 6951, San Jose, COSTA RICA, C.A. (4/1)

Exchange: Cerambycidae (worldwide) and other Coleoptera. Gontran Drovin, 50, Principale, Ste-Henedine, Dorch. Quebec. GOS 2RO, CANADA (4/1)

Exchange Wanted: Approximately 2,000 species of Cerambycidae, Carabidae (Carabus), Tenebrionidae, Cetonidae. Prefer to get Clytini (Cerambycidae) of the whole world. Dr. Diethard Dauber , Neubauzeile 78, 4020 Linz, Austria. (4/1)

Wanted: Butterflies and Coleoptera especially Scarabaeidae, Buprestidae and Lucanidae, from all over the world. I would prefer to buy, rather than trade. Send all lists and letters to Tetsuo Nawa, The Nawa Insect Museum, Gifu Park, 2-18 Ohmiya-cho, Gifu City, Japan. (4/1)

For Sale: Eggs of Giant Stick Insects from Malaysia: Tirachoidae sp. 1 (Brown-green species-females reach 33 cc) and Tirachoidae sp.2 (light green species) with rearing instructions. Write for Details and prices. Frederic LeCorre - B.P. 6 - 34820 Teyran - France. (4/1)

Wanted: Correspondence with retired entomologists with background in tropical Lepidoptera and Hemiptera. Also, I am willing to share some native California Lepidoptera with young entomologists. Write to: Dr. Joe Vredenburgh, 6656 Trigo "B", Goleta, CA 93117 U.S.A. (3/1)

Wanted: I am willing to identify, exchange or purchase livestock (eggs) or deadstock Phasmida (stick and leaf insects) on a worldwide basis. All letters answered. Paul D. Brock, "Papillon", 40 Thorndike Rd., Slough, SL 2 1 SR. ENGLAND. (3/1)

Doug Fregoe '81

J. Bess

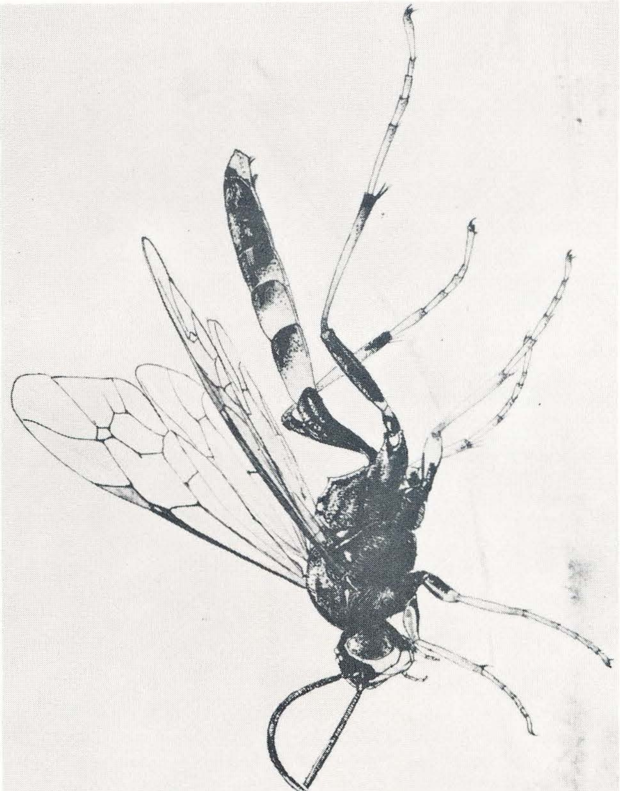

Illustration of Ichnemon wasp by Marek Latzmann, Brno, CZECHOSLOVAKIA

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INFORMATION FOR AUTHORS

Manuscripts and original artwork on any insect or Arthropod-related topics are welcome for publication in Y.E.S. QUARTERLY. There are no page charges. Articles with special interest to youth and amateur entomologists may receive publication priority, but otherwise manuscripts are used on a first come, first serve basis. Manuscripts should be typed (double-spaced), or neatly and legibly written. Photographs (black & white only), drawings, maps, charts, graphs, are encouraged; they should be done in black ink and proportioned so as to fit the 6 x 9 inch format. All authors should supply a title for their article, captions for any illustrations, and a complete mailing address. Whenever possible, state both a common name and scientific name for any species mentioned in articles. Also, for the benefit of members living in other countries, please identify state/province and country when giving locality information. Receipt of all manuscripts will be acknowledged, and they will be subject to minor editing, as necessary. (Sorry, but page proofs cannot be furnished.) NOTE: One paper from among those published will be selected as the "outstanding paper of the year" and the author will be suitably recognized.

Other features, such as news, letters to the editor, field notes, book reviews, and poems, are also welcome, and all of the previously mentioned rules apply. Members are also entitled to submit short "advertisements" for inclusion in the Tradingpost section, describing special desires for information, correspondence, specimens, or publications. All ads should be brief and concise, and should include a complete name and address; also, please specify the number of times you wish the ad to appear! Acceptance and publication of ads is made on a first come, first serve, space-available basis. Refer all manuscripts, ads, inquiries, or questions to Y.E.S. INTERNATIONAL HEADQUARTERS, Department of Entomology, Michigan State University, East Lansing, MI 48824-1115 USA. Thank you.

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